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FINAL ENVIRONMENTAL IMPACT STATEMENT COAL

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Volume II



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SECTION 5

INTRODUCTION

Copies of the Draft EIS were sent to about 800 Federal, state, and local government agencies, nongovernment organizations (such as conservation groups) and private citizens for their review and comment. Notice of availability was published in the May, 1978, *Federal Register*. The notice announced that the BLM invited written comments to be submitted by July 8, 1980, and included a schedule of formal public hearings which were held June 23rd, 24th, 25th and 26th of 1980.

This Section includes copies of letters commenting on the Draft EIS and highlights from the minutes of five public hearings. Most letters have been duplicated here in their entirety but portions of exceptionally long letters have been omitted. All of these letters are available for examination at the Craig District Office, Bureau of Land Management, 455 Emerson Street, Craig, Colorado.

All letters commenting on the Draft EIS were reviewed and considered by the EIS Team in preparation of this Final EIS. Comments which presented new data, questioned facts or analyses, and raised questions or issues bearing directly upon the Draft EIS were fully considered and evaluated. The public hearings were recorded verbatim by a court reporter. Copies of the full transcripts are available for public review at the BLM Craig District Office. Portions of the transcripts containing the remarks of commentors have been included in this Section and appear with the letters of comment.

The substantive issues raised in these letters and public hearings have been extracted, edited and grouped by topic. A response to each of these issues has been given. In this way the reader may easily see how, topic by topic, the informed opinions of others agree or disagree with the assessments made by the EIS team. The issues have been numbered within these topics and appear under the name of each commentor in the LIST OF COMMENTORS given below in the INDEX TO SECTION 5. By referring to the issue numbers indicated the reader may determine what issues were raised by each commentor and find the response given.

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POLICY, AND THE PURPOSE AND NEED FOR ACTION

SUBJECT: LEASING TARGETS

ISSUE 1-1: Many commentors disagreed with the need for new Federal leasing.

RAISED BY:

John Wiener; Sierra Club/Friends of the Earth (Letter 5)

Sandra Holliman (Letter 7)

Sarah Branson; Sierra Club (Letter 19)

Johanna H. Wald; National Resources Defense Council, Inc. (Letter 30)

Brad Klafehn (Letter 37)

Robert J. Golten; National Wildlife Federation (Letter 48)

Roger L. Williams; Environmental Protection Agency (Letter 54)

RESPONSE: Several commentors felt that, because of their disagreement or confusion with the manner in which the leasing target was calculated, the EIS does not adequately show a need for new competitive leasing. Many pointed out the difference between the baseline used in calculating the leasing target and that used for the No Action Alternative. The baseline used in the No Action Alternative has been revised in this Final EIS to reflect what we feel is a more realistic level of coal production without new competitive leasing, in both the Colorado and Wyoming portions of

the region. Further, this revised baseline will be used when the level of of the leasing target is reconsidered in the final decisions on leasing in the region.

Some commentors felt that production from PRLA should be counted against the target. None of the 26 PRLA in the region has been adjudicated to the point where production estimates can be made. However, a recent District Court decision directs that a lease be issued to Utah International for an area in the Axial Basin, in response to the company's PRLA. The Department has filed a notice of appeal of this decision, although no decision has been made whether to pursue the appeal. If, prior to final decisions on competitive leasing in the region, the Department decides not to pursue the appeal, production from the PRLA involved will be counted against the target.

Some commentors felt that additional coal production can be expected from Federal leases already issued in the region, in that these leases are economically attractive because they have low royalty rates, compared to rates that would be attached to new Federal leases. First of all, production from many of these leases is already included in the baseline. Secondly, the economic attractiveness of other issued leases not included in the baseline has been evident for some time; if mine plans have not yet been filed on these leases one can suspect that there are other aspects of these leases that make them unlikely to be in production, such as environmental or marketing problems. Finally, the economic attractiveness of these leases cannot exist for more than a few more years, because the regulatory requirement for diligent development by 1986.

Some commentors felt the EIS is deficient because the leasing target is based on production goals from DOE which involve relatively high assumptions for the rate of growth in electricity use. Prior to final leasing decisions, a new set of production goals will be developed by DOE which will be based on updated assumptions for electricity use. The goals will be considered by the Department prior to final leasing decisions.

Two commentors felt that the combination of their perception of these alleged inadequacies, together with their other comments, have resulted in a regional environmental analysis which does not adequately assess impacts of the leasing decisions contemplated, and that the EIS ought to be supplemented or reissued as a draft before any decisions are made. We have corrected the analysis in this final version of the EIS for the changes in the baseline mentioned above plus population changes in Wyoming and production changes from the tracts. Impacts of alternatives themselves did not change significantly in real numbers. We do not feel that these changes are of such magnitude to supplement or reissue a draft of this EIS. The alternatives considered bracket a wide range of impacts; this range, together with the reconsideration of the leasing target itself, provide a sound basis for decisions based on the impacts of those decisions. Note that the final leasing targets do not represent final leasing decisions and may be revised (43CFR 3420.3.3(b)). The Department is not bounded in its decisions to meet the calculated target; in essence, the final decisions for competitive leasing, which will be based on the analysis herein and other considerations, become the true final target.

ISSUE 1-2: The leasing target should be based on the social costs of development.

RAISED BY:

Philip H. Schmuck; Colorado Department of Local Affairs (Letter 13)

Steve Colby; Colorado Division of Local Affairs (Letter 14)

Roger L. Williams; Environmental Protection Agency (Letter 54)

RESPONSE: Final leasing decisions (true final targets) will be based on, among other things, the social analysis contained herein.

ISSUE 1-3: The leasing target does not reflect a slow-down in western coal markets.

RAISED BY:

John Wiener; Sierra Club/Friends of the Earth (Letter 5)

Johanna H. Wald; National Resources Defense Council (Letter 30)

Robert G. Demos; Colorado West Area, Council of Governments (Letter 46)

RESPONSE: Final leasing decisions will consider revised production goals from DOE which are anticipated to show some slowdown in coal production, compared to previous estimates.

ISSUE 1-4: The production goal is not a true estimate of current and future coal requirements.

RAISED BY:

Robert G. Demos; Colorado West Area, Council of Governments (Letter 46)

RESPONSE: This may be so, but we do not believe anyone can make a "true estimate." Leasing decisions will be based on the Department of the Interior's best available estimates at the time of decisions.

SUBJECT: LAND USE POLICY

ISSUE 1-5: The application of the unsuitability criteria has not been completely or properly carried out. Specifically, surface owner consultation has been completed for only one tract, ten of the sixteen tracts have not been adequately studied for threatened and/or endangered species, thirteen of them may be encumbered by alluvial valley floors, important information regarding reclamation is lacking for at least four of the tracts, and too many data gaps were identified to make a meaningful analysis.

RAISED BY:

Robert H. Lawton; Department of Energy (Letter 61)

Johanna H. Wald; Natural Resources Defense Council (Letter 30)

Robert J. Golten; National Wildlife Federation (Letter 48)

RESPONSE: The application of the lands unsuitability criteria has been applied for all lands contained within the tracts (see Section 1 of FEIS). This application is documented by the MFP supplements available for review at the Rawlins, Wyoming, and Craig, Colorado BLM District Offices.

Surface owner consultation has been completed for all eleven tracts delineated in Colorado. No consultation was required for the Wyoming tracts as they did not embrace any areas of split estate ownership. This consultation was an informal process to determine surface owner preferences for or against mining and should not be confused with the formal surface owner consent process, which must be completed prior to leasing.

The Coal Management Regulations (43 CFR 3400, Subpart 3427, Split Estate Leasing) provide that consents or statements of refusal to consent may be filed by any private person with an interest in the lease sale of split estate lands within 30 working days prior to the publication of a lease sale notice. It is also the responsibility of the parties intending to file to be aware of pending coal lease sale notice dates. The filing of surface owner consents is therefore the responsibility of the interested parties, not the BLM.

The sixteen tracts have been adequately studied for threatened or endangered species. Consultation with the state for state-listed endangered species and with Fish and Wildlife Service for Federally-listed endangered species has been completed since publication of the draft of this EIS.

Alluvial valley floors are addressed by a text change in Section 4, titled ALLUVIAL VALLEY FLOORS. Reclamation potential is not one of the twenty unsuitability criteria addressed during the land use planning process. It should also be realized that the matrices contained in Volume II of the DEIS were a prior step in the process and since preparation of the DEIS, additional information and analysis has been obtained. This is to say the data gaps identified in the matrices have been filled. Reclamation is addressed in Section 4, SOILS and OSM REGULATIONS.

ISSUE 1-6: Important components of the land use planning requirements of the Federal Coal Management Regulations (43 CFR 3420.1-5) were not conscientiously adhered to, particularly those requiring designation of areas of critical environmental concern (ACEC) and the application of the land unsuitability criteria.

RAISED BY:

Robert Golten; National Wildlife Federation (Letter 48)

Johanna H. Wald; Natural Resources Defense Council (Letter 30)

RESPONSE: All mandatory requirements of 43 CFR 3420.1-5 have been, or will have been, faithfully adhered to prior to lease issuance. These regulations (and the BLM planning regulations, 43 CFR 1601) were promulgated during or after the development of the Management Framework Plan

(MFP) supplements that serve as the basis for this analysis. These MFP supplements included the mandatory elements specified in 43 CFR 3420.1-5(c) plus, importantly, the opportunity for public participation in their development. Sensitive environmental areas were specified both in the Williams Fork and Wyoming MFP's. While these are not formally designated ACEC's, they meet the definition of an ACEC and fulfill the spirit of that requirement in the regulations. The land use planning efforts carried out to support the Green River/Hams Fork Coal EIS were completed during the transitional period of these pending regulations. Following the issuance of final ACEC regulations, future projects will make formal use of the ACEC concept.

SUBJECT: OTHER POLICIES

ISSUE 1-7: The concept of thresholds (43 CFR 1601.0-5, 3420.2-3(f)) was not used in the process of MFP updates.

RAISED BY:

Johanna H. Wald; Natural Resources Defense Council (Letter 30)

RESPONSE: At the time the MFP supplements were prepared, the final Federal Coal Management Regulations (43 CFR 3400) were not yet finalized. However, these supplements conform to the requirements of 43 CFR 3420.1-5(2). Therefore, new MFP supplements were not needed and 43 CFR 3420.2 and 43 CFR Group 1600 were not applicable. Threshold impacts "may" be provided for in future Resource Management Plans (43 CFR 3420.2-3(f)), but in the MFP supplements they were not considered. Thresholds or limits of impacts were used for certain resource analyses in the EIS, specifically hydrology, socioeconomics, and air quality.

ISSUE 1-8: Leasing decisions should be postponed until the results of the ongoing social impact assessment contract are available.

RAISED BY:

Elizabeth Moen; University of Colorado (Letter 22)

RESPONSE: We believe the contract may improve consideration of social impacts in leasing decisions, but we believe also that our current assessment is adequate; the contract results are not a prerequisite to leasing decisions.

ISSUE 1-9: On November 19, 1979, Energy Fuels supplemented its expression of interest to include the Wolf Creek coal reserve both within and without the boundaries of Federal Coal Lease C-22644. Of the three tracts identified by Energy Fuels, only the Pinnacle Tract in Routt County, Colorado, was selected for inclusion in the ranking process.

RAISED BY:

Gerald W. Grandey; Energy Fuels Corporation (Letter 36)

RESPONSE: Energy Fuels originally expressed interest in two tracts. One was delineated as the Pinnacle Tract. Two factors resulted in the second tract not being delineated. First, part of the proposed tract was outside the area subject to the call for expressions of interest. Only those areas where land use plans had been amended to comply with requirements of the new coal program were open for expressions of interest. Second, a major portion of the balance of the tract had been considered unsuitable for coal development as a result of multiple-use decisions made in the land use planning process and thus, could not be considered for leasing.

The call for expressions of interest closed August 24, 1979. Energy Fuels did not submit its expression for the third tract until nearly two months after the deadline for receipt of this information. Problems in tract delineation had already jeopardized the lease sale schedule and it was not possible to go back and delineate additional tracts. I022

BASELINE ANALYSIS AND METHODOLOGY OF THE EIS

SUBJECT: BASELINE ANALYSIS

ISSUE 2-1: Numerous comments were received concerning the development, use of, and viability of the assumptions and projections used in the No Action Alternative (baseline). The principal issues that were raised are:

(1) The Rosebud mine was not included in the baseline.

(2) A Federal Register notice of October 5, 1979 states that Colorado production in 1987 is expected to be 14.8 million tons, but the DEIS assumes a production of 27.4 million tons.

(3) The DEIS does not include the effects of oil and gas exploration, uranium activity in the Red Desert region, and the possibility of gasification in this area with uranium as a by-product of the coal.

(4) Real impact would be a case of 33,000,000 tons/yr. The GR/HF DEIS cites 27.4 million tons/yr. as the baseline with added 13 million tons/yr. because of new leases. This would mean a 65 percent increase in impact; BLM sees "merely" a 48 percent increase.

(5) Projections indicate a much slower growth rate in coal use than predicted in the EIS, and the demand for Federal coal will depend inversely on the amount of private coal developed.

(6) The major elements that were used to develop the baseline should be described.

(7) The baseline has been overestimated.

(8) The baseline was obtained from the NWCCSR of 1976, and are in need of updating. Such updates should be obtained from the companies where possible.

(9) The analysis in the EIS of affected Colorado communities are limited to impacts from the proposed leases. It does not recognize impacts with respect to oil shale development, power plant construction, oil and gas production, uranium development or coal gasification/liquification.

(10) The development of other sources of coal (existing Federal leases, PRLA's, railroad coal, private or state-owned coal) could occur without new Federal leasing, and could define a No-Action Alternative quite differently from that presented in the EIS.

(11) Much more definitive baseline information is available than is presented in the DEIS. This information should have been presented in DEIS.

(12) The effects of Craig Unit 4 and the Moon Lake project are ignored.

(13) The production forecasted for Energy Fuels Corp. is overstated.

RAISED BY:

John Wiener; Sierra Club/Friends of the Earth (Letter 5)

Sandra Holliman (Letter 7)

Jack R. Grieb; Colorado Division of Wildlife (Letter 11)

Phillip H. Schmuck; Colorado Department of Local Affairs (Letter 13)

Sarah Branson; Sierra Club (Letter 19)

Elizabeth Moen; University of Colorado (Letter 22)

Robert H. Shields; U.S. Fish and Wildlife Service (Letter 26)

Catherine Haug; National Wildlife Foundation (Public Hearing Minutes 34)

Robert G. Demos; Colorado West Area, Council of Governments (Letter 46)

Robert J. Golten; National Wildlife Federation (Letter 48)

Roger L. Williams; Environmental Protection Agency (Letter 54)

Gerald W. Grandey; Energy Fuels Corp. (Letter 36)

Brad Klafehn (Letter 37)

Johanna H. Wald; National Resources Defense Council (Letter 30)

RESPONSE: The Colorado baseline presented in the FEIS has been lowered significantly from that presented in the DEIS. The projected annual coal production from the Colorado study area has been decreased by 6.59 million tons in 1987, 7.79 million tons in 1990, and 8.79 million tons in 1995, and there has been a corresponding reduction in cumulative acres disturbed from coal-related development. These changes are shown in Tables 2-2 and 2-3. This baseline reduction was accomplished by contacting as many companies as possible to obtain production forecasts, and by eliminating those proposals from the original baseline which appeared questionable. These projected developments include operations on private, State and Federal lands.

In the case of Wyoming, the coal production projections remained the same; however, the Rosebud mine has been added to Table 2-2. It should be realized that this omission from the DEIS was an editorial error on this table only. The production disturbance, and other factors associated with this operation were included in the DEIS impact analysis. The Wyoming baseline included projected production not dependent on new Federal leasing and does not include development of checkerboard lands without the proposed action. The Section 24 pit is included with the production shown for Energy Development. Corral Canyon, North Knobs, Atlantic Rim, and Continental Divide would be dependent on new Federal leasing and are not included. Hanna South would require new Federal Reserves after 1990. During preparation of the baseline, Colorado Ute Electric Association was contacted concerning coal consumption within the GR/HF Region. At that time, local coal use was projected for only the Hayden Station and Craig Units 1, 2, and 3. Information on Craig Unit 4 was not provided, and it was therefore not included in the baseline.

The Moon Lake Project is directly tied to issuance and development of PRLA. PRLA which have not been finally adjudicated have not been analyzed in this EIS (see Section 1). A separate DEIS on this project is scheduled for completion in September, 1980. Also, the area that would be impacted by the Moon Lake Project is, for the most part, outside of the impacted areas analyzed for this coal-leasing action. For further information on baseline-related changes in the FEIS, the commentors are referred to the GUIDE TO THE EIS in Volume I

The baseline for the study region has been divided into coal-related activities and non-coal-related activities. All of the effects of these activities which include projected or proposed coal production (without new Federal leasing), oil shale, oil and gas, uranium, and other activities shown in Table 2-3 were carried forth through the analyses in the EIS. The impacts of just these projected activities constitute the analysis of the No Action Alternative.

The major elements of the baseline have been further defined, and the commentors are referred to the description of the No Action Alternative in Section 2.

ISSUE 2-2: The impacts from the construction of railroad spurs are nowhere addressed, nor is the likelihood of increased development (particularly mineral) along the new rail lines considered, or its possible impacts analyzed.

RAISED BY:

Brad Klafehn (Letter 37)

Robert J. Golten (Letter 48)

RESPONSE: The impacts from construction of railroad spurs was considered in the EIS from the standpoint of adding additional acres disturbed from off-site facilities. Tables 2-5 to 2-15 show the estimated miles of rail spurs built into the Acres Disturbed tables, under off-site facilities. These acres of disturbance were used in the impact analysis for each applicable resource.

The specific locations of these spurs is not known at the present time, and would be determined by the successful bidder when a mine plan is submitted. The estimated mileage and acres disturbed was developed during tract delineation for the purpose of general impact analysis. Specific impacts from these spurs would be addressed when required rights-of-way applications are filed by the lessee and environmental analysis completed.

The likelihood of increased mineral development along these spurs is not known and would be difficult to predict. All proposed and existing developments in the area are listed in Tables 2-2 and

2-3 and were considered in the impact analyses. No other proposed developments are known at this time.

ISSUE 2-3: The Wyoming Geological Survey was not consulted in developing the Wyoming baseline coal activity level. This causes the baseline to be suspect.

RAISED BY:

John Wiener; Sierra Club/Friends of the Earth (Letter 5)

Johanna H. Wald; Natural Resources Defense Council (Letter 30)

RESPONSE: Mr. Gary Glass of the Wyoming Geological Survey was consulted on the DEIS analysis on July 11, 1980. The annual coal production estimates appearing in the DEIS for those mines in the Hanna Coal field (15.9 MMT/yr in 1987--after inclusion of the Rosebud Mine, see Issue 2-1) do not, in Mr. Glass' opinion, differ significantly with the estimates in Wyoming Geological Survey Report of Investigations No. 17 (16.8 MMT/yr estimated production in 1985). The Wyoming baseline is an estimate of future annual mine production, not requiring new Federal coal leasing, including the Carbon Basin mine which is not presently leased but is being processed as a hardship application under 43 CFR 3425.1-6 of the Coal Management Regulations.

ISSUE 2-4: The design capacity of the Hanna mines will meet the annual coal production demand projected by the Department of Energy model.

RAISED BY:

John Wiener; Sierra Club/Friends of the Earth (Letter 5)

Johanna H. Wald; Natural Resources Defense Council (Letter 30)

RESPONSE: The Wyoming baseline is based on estimated annual production from Carbon Basin and those mining ventures not dependent on new Federal coal leasing. While we agree with the Wyoming Geological Survey's design capacity figures, production at design capacity levels would cause presently leased Federal reserves to be substantially depleted by 1990.

ISSUE 2-5: Production of 14.8 million tons per year in Colorado will jump to 27.4 million tons per year according to the statement and yet it is stated that the additional impact will be almost negligible. This almost doubling of production will almost double the impact.

RAISED BY:

Craig I. Thompson (Letter 53)

RESPONSE: For many resources, the EIS indicates that development from the No Action Alternative will have significant impacts (see Alternative Matrix, Section 2).

It cannot be stated that the doubling of production will double the impacts, as the impacts are dependent upon the type of development, the magnitude of the disturbance, and the sensitivity of the resources involved. The impact analyses in the EIS have taken into account all these factors to arrive at the conclusions presented.

SUBJECT: METHODOLOGY AND ORGANIZATION OF THE EIS

ISSUE 2-6:

(1) How are cumulative impacts calculated? At one point the DEIS states cumulative impacts are not additive, but there is no formula for cumulation. Impacts should vary directly with production.

(2) The DEIS does not assess the impacts of the alternatives on the existing environment but on an existing environment plus "expected" development. This approach obscures the environmental impacts of new leasing.

(3) The results of the program and the effects of the baseline should be viewed in terms of the cumulative impacts.

(4) The site specific analyses should be updated to reflect new or additional information.

(5) Impacts should be viewed in terms of their cumulative effect, not their comparative one.

(6) There is little comparative analyses of alternatives within the text.

(7) The matrices are too detailed and complicated for any practical use. Just the factors used in tract ranking and selection should have been provided.

(8) The site specific analyses are too superficial.

RAISED BY:

Sandra Holliman (Letter 7)

Elizabeth Moen; University of Colorado (Letter 22)

David E. Preston; Rocky Mountain Energy Co. (Letter 39)

Robert J. Golten; National Wildlife Federation (Letter 48)

F. Phillip Sharpe; USDOI Water and Power Resources Service (Letter 55)

Brad Klafehn (Letter 37)

Roger L. Williams; Environmental Protection Agency (Letter 54)

Craig I. Thompson (Letter 53)

RESPONSE: The impact analyses in the EIS are two-fold in nature. First they assess the cumulative impact of projected development and the Federal action at four key or target years. Second, the relative magnitude of impacts of just the proposed Federal action is compared to the impacts of what is expected to happen without new Federal leasing. This approach enables the decision-maker and the reader to see the total picture as well as the effects of just the Federal action.

The calculation of cumulative impacts varies between resources. In some instances they may be additive, but in others they are not. Impacts will generally increase with production, but they are more dependent upon the type of development, magnitude of the disturbance, and the sensitivity of the resource involved. The methods used to calculate and determine cumulative impacts are either explained in Section 4 or the Appendices for the individual resource of concern.

The cumulative analyses take into account projected development and growth expected to occur in the study area at the time frames addressed, and are not based on the situation that exists today. Clearly, conditions will be different in 1985 and beyond than they are today, and to use existing conditions to predict future impacts does not appear to be a reasonable approach.

The matrices in Part 2 of the EIS are an attempt to provide a tabular summary of the site specific analysis phase of the Federal Coal Management Program. The matrices contain all of the major factors that were used in the site specific analyses. During the time that the DEIS was being prepared, new data was obtained and in some instances more refined methodologies for impact analysis were developed. Therefore, there may be some inconsistencies between the data in the matrices and that in the EIS. The EIS does provide the assumptions, basic data, and methodologies used in the analysis, and revising the matrices would not appear to be germane to the EIS analysis itself. Table 1-1 has been added to the EIS which shows the economic and environmental factors that were used by the Regional Coal Team to recommend for or against certain tracts.

The EIS provides a comparative analysis of each alternative in Section 2. A matrix (Table 2-1) compares the major impacts of each alternative in tabular form. The narrative in Section 2 provides a summary of each of the five alternatives and the environmental impacts inherent to each alternative.

A GUIDE TO THE EIS has been added to the beginning of Volume I. This Guide expands on the organization of the EIS, use of the EIS, and definitions of key concepts used in the analysis.

ISSUE 2-7: The size and configuration of some of the tracts do not conform to acreage and configuration limitations and regulations.

RAISED BY:

Brad Klafehn (Letter 37)

RESPONSE: All of the delineated tracts (which are preliminary logical mining units) are within the acreage limitations and meet the definitions with respect to configuration as set forth in the Federal Coal Management Regulations (43 CFR 3400.0-5(cc)).

ISSUE 2-8: Will additional generating capacity and/or new transmission lines be required to implement development plans?

RAISED BY:

Office of Energy Conservation (Letter 12)

RESPONSE: The description of the region on pages 55-58 covers the entire Green River/Hams Fork coal region and extends well beyond the boundaries of the impacted or study regions used for individual resource analysis (see page 58). This description was provided as a general overview of the entire coal region as it relates to the impacted areas.

Power line requirements for each of the tracts were developed by USGS through preparation of proposed development plans for each tract. The assumption used was that power lines would be constructed from each tract and would tie in to the nearest power source.

ISSUE 2-9: The EIS should contain stipulations that require the lessee to comply with state and local ordinances.

RAISED BY:

Duane L. Rehborg; Rio Blanco County Development Department (Letter 47)

RESPONSE: Section 2, subtitle REQUIRED AUTHORIZATIONS, indicates that laws and regulations imposed at the state and county level are to be complied with prior to development of Federal coal. All leases issued by the BLM contain a stipulation that requires the lessee to obtain all necessary permits prior to mining.

ISSUE 2-10: Why are all the Wyoming tracts included in all of the alternatives?

RAISED BY:

Craig I. Thompson (Letter 53)

RESPONSE: The five Wyoming tracts are included in all alternatives as a result of ranking and selections by the Regional Coal Team at its December 13, 1979 meeting (see Section 1). Rankings were based upon coal economics, environmental impacts and social and economic impacts. It should be noted that even in the Low Alternative, the amount of Colorado coal to be leased would exceed the amount of Wyoming coal and the disparity is greater with each higher level alternative. Adoption of the preferred alternative would result in leasing 567 million tons of coal in Colorado and 186 million tons in Wyoming--a ratio of about three to one. Thus, it should not be concluded that Wyoming would bear a disproportionate portion of the coal leasing impacts.

3

GEOLOGY AND MINERALS

ISSUE 3-1: There is no assessment of sand and gravel operations that will accompany local development.

RAISED BY:

Sarah Branson; Sierra Club (Letter 19)

RESPONSE: An analysis of potential sand and gravel operations that could develop would be difficult. New operations of this type could occur if the demand for these materials exceeds the present supply from existing operations, and these operations could occur on private, state, or Federal land.

The impacts of such development would be assessed at the time that an operation is proposed and an application filed. In the case of private or state land, impacts and mitigation would be under the jurisdiction of the State of Colorado. For Federal land, the Bureau of Land Management in conjunction with the state would have the authority to regulate such operations.

At the present time, no great increases in new sand and gravel operations are anticipated.

ISSUE 3-2: Potential for fires as a result of subsidence during or following underground mining on the Bell Rock and Empire tracts has not been addressed.

RAISED BY:

Louis E. Allen; Wyoming State Engineer's Office (Letter 44)

RESPONSE: All coal beds underlying the Bell Rock Tract of sufficient thickness to support combustion are currently saturated and must be dewatered during mining operations. On completion of mining, resaturation will reoccur. Because of the high moisture content of the coal, the appreciable depth of mining below the surface, and resaturation of the mined sequence on completion of mining, the potential for fire on the Bell Rock Tract is very low.

Higher risk of fire exists on the Empire Tract where some uncertainty exists as to how far updip, and thus, how close to the surface mining will extend. The potential for fire on the Empire Tract, however, should be no greater than for most underground mines and could be minimized by standard precautionary measures. In the unlikely event of fire, no surface structures would be threatened.

4

SOILS AND RECLAMATION

ISSUE 4-1: The fact is that precipitation is relevant to reclamation, if not most other features of environment, only insofar as it results in moisture being made available to plants. There is no way to judge from the DEIS how much of the precipitation is snow, which sublimates and contributes nothing to the soil moisture, and how much is thundershower, which runs off and contributes nothing to soil moisture. There is no way to judge how much of the precipitation could be caught and held by snow fences and other catchment techniques and made available to plants. This may be partly due to the lack of reclamation-related data which characterizes the tract profiles for 4 of the 16 tracts, and it is no doubt partly due to the lack of time in which to do an adequate job.

RAISED BY:

John Wiener; Sierra Club/Friends of the Earth (Letter 5)

Johanna H. Wald; Natural Resources Defense Council (Letter 30)

RESPONSE: As stated, droughts are more likely to occur in Wyoming because of lack of moisture during the growing season. Snow melt in the spring provides moisture for plant growth as do rainshowers, however brief or intense. The precipitation distribution (Section 3, Climate) should permit revegetation during an average year. The soil data contained in Soil Conservation Service surveys and Energy Mineral Rehabilitation Inventory and Analysis studies was considered adequate for pointing out the most important reclamation problems.

ISSUE 4-2: Several characteristics of the tracts indicate the great difficulty that will be involved in restoring the surface. All of the tracts are found in a semi-arid region. There will be adverse impacts on the soils as a result of mining; decreased permeability and filtration rates and decreases in soil microbiota, which contribute to soil fertility. Wind erosion rates are moderate to high, and water erosion rates vary, all aggravated by the existence of steep slopes (In one tract as much as 75 percent of the slopes have a grade of 25 percent or greater). Because of alterations in the microbiota of the soil the vegetation eventually reestablished is likely to be of a different type than that originally inhabiting the tract, which may result in permanent losses of winter range and habitat. All of the tracts evaluated in the DEIS for reclamation potential were rated "low." Of those tracts not evaluated for overall reclamation potential most have soils with a very high percentage (80 to 90 percent) of low reclamation potential. Nor do these figures make the distinction between reclamation (returning the land to a usable state) as opposed to restoration (returning the land to its previous use). Most of the discussion in the DEIS suggests the high likelihood of failure of

reclamation. As restoration to original use will be even more difficult to achieve, it suggests an even bleaker picutre, aggravating the impacts on wildlife discussed above.

RAISED BY:

Robert Gotten; National Wildlife Federation (Letter 48)

Johanna H. Wald; National Resources Defense Council (Letter 30)

Catherine Hang; National Wildlife Federation (Public Hearing Minutes 34)

Brad Klafehn (Letter 37)

Robert Shields; U. S. Fish and Wildlife Service (Letter 26)

RESPONSE: Low ratings for reclamation potential of Colorado soils in Part II (of the DEIS) primarily indicate that stabilization of soils reconstructed on steep slopes would require the application of the most sophisticated methods currently practiced. Stabilization of slopes greater than 4:1 poses severe technical problems under any circumstances. However, the tracts mentioned could still be reclaimable, utilizing all of the technology available.

Alteration of existing microclimates, resulting from a particular combination of conditions (soil, aspect, relief, etc.), within the tracts does not preclude the reestablishment of native vegetation on the tracts.

Reclamation to previous use is anticipated on both the Colorado and Wyoming tracts. In Wyoming, reseeding failure due to drought is the main reclamation problem (National Academy of Sciences, 1974, and BLM 1979b). It is estimated that failure might occur in one attempt out of three. This does not preclude revegetation success within the acceptable time period. OSM assessment of the feasibility of reclamation plans submitted to OSM will be made prior to granting of permission to mine.

ISSUE 4-3: The draft EIS discusses mulching as a mitigative measure and recommends applications of 3-4 tons/acre. This is far heavier than the 1.5-2 tons/acre most commonly used and recommended in most literature. The draft EIS also recommends topsoil replacement such that bare topsoil is not subjected to heavy runoff from melting snow. The only way this could be done is to lay the topsoil down in the spring when its too wet and then seed and hope for plant establishment by the end of the growing season. This would require unlikely climatic circumstances and would be in conflict with 30 CFR 816.113 since the normal period of planting in the study region is in the fall.

RAISED BY:

Wayne F. Sowards; Utah International Inc. (Letter 38)

RESPONSE: Three to four tons/acre of mulch is not inordinately high. However, the benefits from retarding erosion must be weighed scientifically in each case against the possible detrimental effects of mulching on soil microclimates and availability of plant nutrients.

The time of planting in the study region is, quite correctly, in the fall, which means topsoil will necessarily be bare during the following spring runoff.

ISSUE 4-4: A relatively unique reclamation concern has been identified for the Red Rim area; rapid restoration of crucial pronghorn winter range. To demonstrate the potential for rapid reclamation of crucial winter range, BLM and RMEC have established a test site on Red Rim.

The site consists of 10 acres within an exclosure where mining has been simulated and reclamation procedures are being tested. The technique being demonstrated is transplanting mature sagebrush plants (*Artemisia tridentata*) using a tree spade. Initial results of sagebrush plantings are encouraging.

RAISED BY:

David Preston; Rocky Mountain Energy Co. (Letter 39)

RESPONSE: We appreciate the new data in this very important area.

ISSUE 4-5: Pages 104 and 105, Tables 31 and 32 indicate that approximately 42 percent of the tracts identified (both Colorado and Wyoming) have surface material which is deemed unsuitable for reclamation. For reference, page 197 (last paragraph, column 1) states: "OSM regulations require that vegetation be reestablished and land mass be returned to a contour that blends with the

surrounding topography." It appears that existing OSM regulations may in fact preclude mining of tracts presently proposed for leasing. If this is a possibility, the implications upon the proposed action deserves prime consideration in the final EIS.

RAISED BY:

Robert Shields; U. S. Fish and Wildlife Service (Letter 26)

RESPONSE: Assurance of reclaimability will be determined by OSM before mining is permitted based upon the reclamation plans. The soils considered to be unsuitable for surface backfill should not be stockpiled with higher quality topsoil. In some instances certain overburden material may be as good or better than subsoil as surface backfill. Some of the soil deemed unsuitable may be utilized as surface backfill when it is feasible for stockpiling (see Soils, Sections 3 and 4).

The existence of soils on a tract which are undesirable for use as surface backfill does not mean that a part of the tract is unreclaimable. However, a thinner layer of replaced topsoil could result in decreased soil fertility for a period of many years.

ISSUE 4-6: Not all microorganisms are lost when topsoil is stripped.

RAISED BY:

David E. Preston; Rocky Mountain Energy Co. (Letter 39)

RESPONSE: We agree that all microorganisms are not lost when topsoil is stripped. It was not our intention to imply otherwise.

ISSUE 4-7: Handling overburden entirely with bulldozers can lead to erosive underground waterways.

RAISED BY:

David F. Preston; Rocky Mountain Energy Co. (Letter 39)

RESPONSE: We agree; the handling of overburden entirely with bulldozers is not desirable. However, handling topsoil with bulldozers would cause less damage to topsoil structure than self-loading scrapers.

ISSUE 4-8: I would like to direct your attention to a study recently released by the National Academy of Sciences in which they assert that lands receiving less than twelve inches of rain per year are not reclaimable under the present constraints of revegetation with natural flora.

RAISED BY:

Craig Thompson; Rancher (Letter 53)

RESPONSE: It is possible to rehabilitate those acres receiving ten inches of annual rainfall (National Academy of Sciences, 1974, p.2). Where annual rainfall is ten inches, precautionary measures must be taken to obtain success (p. 81). Both introduced and native species have been seeded successfully throughout the west in this ecosystem (p. 81).

ISSUE 4-9: It does not make sense to lease Wyoming tracts until the success of the reclamation attempts made at the Bridger Coal Mine are assessed.

RAISED BY:

Craig Thompson; Rancher (Letter 53)

RESPONSE: Projection of reclamation success for the tracts included in the EIS area are based on personal observations of reclamation projects in the Hanna area, consultation with persons conducting reclamation research, and applicable literature. Experience with the Bridger Coal Mine reclamation attempts is of minimal value to this FEIS due to the more severe climatic and soil conditions that are encountered at that site as compared to the site in the Rawlins and Hanna area.

5

WATER RESOURCES

SUBJECT: ALLUVIAL VALLEY FLOORS

ISSUE: 5-1 Failure to apply Criterion No. 19 (Identification assessment procedures) means that as many as 13 of the 16 tracts included in the analysis may be encumbered by alluvial valley floors. Without this screening step before any leasing has begun, it is less likely that lands will be designated unsuitable if alluvial valley floors are found during the mine plan review stage. Consequently, some lands may be sacrificed.

RAISED BY:

John Wiener; Sierra Club/Friends of the Earth (Letter 5)

Sarah Branson; Sierra Club (Letter 19).

Johanna H. Wald; Natural Resources Defense Council, Inc. (Letter 30).

Catherine Haug; National Wildlife Federation (Public Hearing Minutes 34)

Brad Klafehn (Letter 37)

Robert J. Golten; National Wildlife Federation (Letter 48).

RESPONSE: The absence of definitive guidelines for identification of alluvial valley floors during preparation of the 1979 Supplement to the Williams Fork and Wyoming Management Framework Plans prevented formal application by BLM of unsuitability criterion 19 to prospective lease tracts. Nevertheless, an assessment of alluvial valley floors was made on each tract by the U.S. Geological Survey as part of the site-specific analysis. Also, the Office of Surface Mining (OSM) must make a final determination regarding the existence of an alluvial valley floor at the time of mine plan submission and decide whether mining will or will not be permitted. Because of the protection afforded by 30 CFR 822.12, presumably no significant impacts would occur to any alluvial valley floors as a result of leasing and development of new Federal coal. See text revision Section 4, WATER RESOURCES, ALLUVIAL VALLEY FLOORS.

SUBJECT: SEWAGE EFFLUENT

ISSUE 5-2: The impact of sewage effluent on aquatic biology in the Yampa River during periods of extreme low flow would be much less severe than stated because of (1) increased storage capacity in the Yampa watershed, which would increase base flows, and (2) expanded treatment capacity at both Steamboat Springs and Craig plants to handle the projected 1995 and 2000 populations, respectively.

RAISED BY:

Robert J. Shukle; Colorado Department of Health (Letter 2)

Jack R. Grieb; Colorado Department of Natural Resources (Letter 11)

Robert H. Shields; USDI, Fish and Wildlife Service (Letter 26)

Roger L. Williams; Environmental Protection Agency (Letter 54)

RESPONSE: Severe impacts to aquatic biology in the Yampa River were predicted only during periods of extreme drought when flows may drop to less than 5 cfs, such as occurred in 1934. Although expansion of sewage treatment facilities and strict enforcement of NPDES permit standards would minimize any direct threat to aquatic biology from toxic substances in sewage effluent, the presence of dissolved plant nutrients, such as nitrogen and phosphorous compounds, would greatly stimulate phytoplankton growth in the deeper pools occupying scour holes on the river bed.

The phytoplankton bloom in turn would greatly restrict light penetration, encourage a shift towards algae types of plants, and increase biological oxygen demand (BOD) because of the increased mass of dying and decaying organic matter settling below the level of maximum light penetration. As the stream flow velocity and volume would not be sufficient to reoxygenate the pools at depth, fish, aquatic insects, etc., occupying the deeper, cooler waters would be driven to shallow depths in search of adequate oxygen. The combination of reduced dissolved oxygen (DO) levels and increased water temperatures would greatly increase mortality rates, seriously affecting aquatic biology with respect to both species diversity and numbers.

At the time of preparation of the DEIS, approval of Yamcolo Reservoir in the headwaters area of the Yampa River appeared to be stalled with no solution in sight to remaining obstacles. Other storage reservoirs on the Yampa River are not adequate to significantly increase base flow during periods of extended drought. Completion of Yamcolo Reservoir, therefore, was treated as an uncommitted mitigation that would increase base flow in the Yampa River to a minimum of 20-25 cfs and thereby provide adequate dilution and oxygenation to minimize any impact of sewage effluent on aquatic biology. Since completion of the DEIS, however, the Water and Power Resources Service (May 1980) reports that a construction contract for the Yamcolo Project has been signed and construction is under way. The effect is to virtually eliminate the potentially disastrous impact of sewage effluent on aquatic biology during periods of extreme low flow as described in the DEIS. The text has been revised accordingly (see Sections 2 and 4, WATER RESOURCES, POLLUTION OF RIVERS AND LAKES BY SEWAGE EFFLUENT).

ISSUE 5-3: It is presumed that the suggested EPA 1985 effluent standards for the proposed regional wastewater treatment plant at Steamboat Springs (p. 186, DEIS) refers to the 1985 "no discharge" goal of the Clean Water Act. EPA has not defined in policy or regulation how this goal is to be achieved, nor has Congress.

5**RAISED BY:**

Roger L. Williams; Environmental Protection Agency (Letter 54)

RESPONSE: The 1985 suggested EPA effluent standards for the proposed regional wastewater treatment plant at Steamboat Springs cited in the text refer to standards suggested by EPA in the Final Environmental Impact Statement, Steamboat Springs Regional Service Authority, 201 Wastewater Facilities (EPA 1977). Most specifically, this suggested standard limits concentrations of ammonia nitrogen in sewage effluent to 1.0 mg/L. The text (Section 4, WATER RESOURCES) has been revised to clarify this reference.

SUBJECT: WATER RIGHTS

ISSUE 5-4: What will be the impacts in this arid region as a result of the loss of or damage to existing water sources, and what will be done to provide suitable alternative supplies?

RAISED BY:

Hal D. Simpson; Colorado Division of Water Resources (Letter 9)

Frank S. Lisella, Ph.D.; Department of Health and Human Services (Letter 27)

Wayne E. Sowards; Utah International, Inc. (Letter 38)

W. Donald Dexter; Wyoming Game and Fish Department (Letter 42)

Louis E. Allen; Wyoming State Engineer's Office (Letter 44)

RESPONSE: Regulations 30 CFR 816.54 and 817.54 pursuant to the Surface Mining Reclamation and Control Act of 1977 require that any person who conducts coal surface or underground mining activities shall replace the water supply of an owner of interest in real property who obtains all or part of his or her supply of water for domestic, agricultural, industrial, or other legitimate use from an underground or surface source, where the water supply has been affected by contamination, diminution, or interruption proximately resulting from the mining activities. Wyoming and Colorado statutes and regulations also provide similar protection.

Removal of water supplies on the tracts during the period of active mining and consequent loss of water for wildlife would be largely or wholly mitigated by the construction of sedimentation ponds as required by 30 CFR 816.42 and 817.42 to reduce sediment yields downstream.

ISSUE 5-5: Will it be possible or feasible to fully utilize or to transfer current water rights from uses such as irrigation to coal development inasmuch as water is in such short supply? Will any of the proposed sites construct a coal preparation plant?

RAISED BY:

Frank S. Lisella, Ph.D.; Department of Health and Human Services (Letter 27)

RESPONSE: Wyoming and Colorado statutes permit full utilization of prior senior water rights at the expense of later junior rights in the event that the supply is inadequate such as during periods of drought. Moreover, senior rights can be acquired through purchase much the same as real property. Development of new Federal coal, therefore, depends on the existence or acquisition of suitable rights by both the mining companies and municipalities experiencing consequent growth. If such rights are not held or cannot be acquired, those deficiencies would be identified at the time of preparation of an EIS for each proposed mine, and a permit to mine could not be issued. The implication here, of course, is that coal development would probably proceed through acquisition by the coal companies and by municipalities of senior water rights currently held by ranchers, with a consequent reduction in irrigation activities.

As no existing mines in the areas described in this EIS utilize coal-preparation plants, no such plants are expected on any of the tracts included in this analysis.

ISSUE 5-6: Where is the expected 447 acre-feet/year of water for municipal use in the North Platte River Basin to be obtained? The DEIS makes no mention of the North Platte River Decree, or of state water laws.

RAISED BY:

Louis E. Allen; Wyoming State Engineer's Office (Letter 44)

RESPONSE: Table B-2 (Appendix B) shows that a total of 535 ac-ft/yr of water would be used in the North Platte watershed by 1995 as a result of the development of new Federal coal. Of this total, 187 ac-ft/yr would be used by the new mines and 348 ac-ft/yr would be used for municipal and rural water supplies. As stated in the text (Section 4, WATER RESOURCES, INCREASED CONSUMPTIVE USE OF WATER), "Any increased use of water by coal-related development, therefore, must depend on existing permitted uses that are not being fully utilized or on the transfer of current water rights from other uses such as irrigation." If adequate water rights required by coal-related development cannot be demonstrated at the time of preparation of an EIS for each proposed mine, presumably a mining permit would not be issued for that mine and no additional development would occur.

Legal constraints to utilization of North Platte River water are incorporated in this document by reference to the Southcentral Wyoming Coal ES, p. R2-31, which is consistent with new guidelines promulgated by CEQ for preparation of condensed environmental impact statements.

ISSUE 5-7: The conclusion that only 14 wells and 9 springs would be severely impacted at maximum development is questioned inasmuch as USGS maps do not show all wells and springs in an area. Mining during periods of drought could permanently damage these and other springs.

RAISED BY:

Bill Perry; Rancher (Letter 31)

RESPONSE: The number of wells and springs that would be severely impacted under the various development alternatives in Colorado and Wyoming (Table 4-3) was determined from a field appraisal of each of the tracts together with adjacent areas and not merely from available maps. The field examinations that formed the basis for the regional water-resources analysis included a concerted effort to collect pertinent data for all wells and springs on and adjacent to each tract. That data is presented in the respective site-specific analyses on file in the BLM District Offices in Rawlins, Wyoming, and Craig, Colorado. The timing of mining, whether or not coinciding with a period of drought, would have no significant effect on the number of wells or springs permanently impacted in an area. Regulations 30 CFR 816.54 and 817.54 require that all water supplies impacted by mining operations must be replaced by those conducting the mining operations.

SUBJECT: INSUFFICIENT OR INCONSISTENT DATA

ISSUE 5-8: The Alternative Matrix (Table 2-1) is lacking data pertaining to surface and ground-water impacts.

RAISED BY:

Sarah Branson; Sierra Club (Letter 19)

RESPONSE: Table 2-1 is a summary matrix prepared to show the relative magnitude and significance of maximum impacts for the various alternatives. More detailed data are presented in Section 4, WATER RESOURCES.

ISSUE 5-9: Review of the water-resources effects in Wyoming could not be very specific because water-resources data were insufficient for all tracts and were omitted from the matrices in Part II for the Medicine Bow and Seminoe II LMU's.

RAISED BY:

Louis E. Allen; Wyoming State Engineer's Office (Letter 44)

RESPONSE: All water-resources data for the respective tracts are presented in the site-specific analyses on file in the BLM District Offices in Rawlins, Wyoming, and Craig, Colorado. Selected data significant to tract ranking were summarized in matrices for use by the Regional Coal Team. Because of the great bulk of the site-specific analyses, no consideration was given to inclusion of this background material in the regional analysis. The decision was made at the last minute, however, to include the site-specific matrices in Part II of the DEIS. In the rush to transmit that material to the printers, the water-resources data were inadvertently omitted for the Medicine Bow and Seminoe II tracts. Those data are available for inspection at the BLM District Office in Rawlins, Wyoming.

ISSUE 5-10: Data presented in the site-specific matrices are incomplete, inconsistent, and do not correlate with projected changes in salinity in the Colorado River as a result of development.

RAISED BY:

Robert J. Shukle; Colorado Department of Health, Water Quality Control Division (Letter 2)

RESPONSE: Data summarized in the site-specific matrices were selected to facilitate track ranking by the Regional Coal Team and were not intended to be sufficiently detailed to permit correlation between elements. Complete data for each tract are presented in the respective site-specific analyses on file in the BLM District Offices in Rawlins, Wyoming, and Craig, Colorado. For example, the numbers cited in the comment for Danforth Hills #2 and Williams Fork Mountain tracts are the estimated increase in salt yield to the Colorado River as a result of the postmining leaching of the spoils aquifers. The effect of mining on these tracts on the salinity of the Colorado River depends not only on leaching of the spoils aquifer, but on consumptive use of water by the increased population, salts added in sewage effluent, etc. (see METHODOLOGY FOR COMPUTATION OF DISCHARGE WEIGHTED AVERAGE DISSOLVED SOLIDS CONCENTRATION IN THE COLORADO RIVER AT IMPERIAL DAM, Appendix B). It is not surprising that no good correlation exists between a single factor, such as salts contributed by leaching of the spoils aquifer and the overall effect of the development of a tract on the salinity of the Colorado River.

Contribution of salts to the Colorado River from the Empire, Bell Rock, Hayden Gulch, and Lay tracts were not given in the matrices because the analyses indicate that no increased salt load to the river would occur from postmining leaching on these tracts.

The apparent inconsistency in data presented for the Grassy Creek tract is the result of a typographical error. The range in annual salt load to the Yampa River was estimated to be 100-130 tons/yr. This should have been shown under Surface Water as an average of 115 tons/yr rather than 155 tons/yr.

SUBJECT: IMPACTS TO GROUND WATER

ISSUE 5-11: The conclusion that ground-water impacts would be limited to the "shortterm and local" (p. 176, DEIS) is challenged. Local impacts may become very significant and "shortterm" is relative. The ground-water impacts from the Edna and Energy Fuels mines, for example, may last as long as 500 years.

RAISED BY:

Sarah Branson; Sierra Club (Letter 19)

RESPONSE: The text in question states that "impacts to ground-water supplies would be very local, largely shortterm, and principally a matter of increased drilling and pumping costs." This conclusion is based on the requirement that water supplies interrupted by mining must be replaced by those conducting the mining operations (30 CFR 816.54 and 817.54). Those parts of the text describing removal of parts of certain aquifers, interruption of premining ground-water flow, modification of flow by replaced spoil materials, changes in water quality and effects of subsidence from underground mining emphasize that these impacts to the ground-water systems would generally be long term, though very local. Although such impacts should have no regional significance, this is not to imply that these impacts would not be significant over the long term within and immediately adjacent to the mined areas.

ISSUE 5-12: Mining may destroy ground-water aquifers for generations to come. Reclamation may never restore aquifers disturbed by mining, and if so, the water may be unfit for human consumption and total recharge may take millions of years.

RAISED BY:

Bill Perry (Letter 31)

Craig I. Thompson (Letter 53)

RESPONSE: Experience to date shows that spoils aquifers in reclaimed mined areas would have significantly different water-bearing characteristics than those removed by mining as described in Section 4, WATER RESOURCES, GROUND WATER. Water obtained from the replaced spoils aquifers would be generally unsuitable for domestic use over the long term, but should have no deleterious effects on livestock and wildlife, except in the Hanna area in Wyoming where water from the spoils aquifers probably would be marginal for all such uses. The recharge capacity of the reclaimed spoils aquifers should be equal to or greater than that of the original aquifers. Resaturation of the spoils aquifers to a level of equilibrium, whereby ground-water discharge from the reclaimed mined areas approximates recharge, should occur within less than a decade after completion of reclamation on most tracts. The maximum time required for reestablishment of ground-water equilibrium, after completion of reclamation, should not exceed 20 years on any of the tracts.

ISSUE 5-13: Are there any significant regional aquifers, particularly those that are or could be used for a domestic water supply, underlying the lease areas that could be adversely affected by leachate from the reclaimed spoils aquifers? Are there any nearby communities dependent on such aquifers for all or part of their municipal water supply?

RAISED BY:

Roger L. Williams; Environmental Protection Agency (Letter 54)

RESPONSE: Although vertical permeabilities within the reclaimed spoils aquifers in mined areas would be significantly higher than under premining conditions, interbedded shales in the coal-bearing formations should greatly retard or prevent movement of dissolved constituents in the spoils leachate downward into underlying aquifers. Moreover, confining heads in the deeper aquifers in many, if not most, of the tracts are higher than in the overlying beds that would be disturbed by mining. Thus, movement of ground water in many tracts would tend to be upward into the spoils aquifers rather than downward into the deeper aquifers.

No significant regional aquifers currently being used as a source of water for domestic supplies or having potential for future use are threatened by coal development on any of the tracts included in this analysis, and no nearby communities are partially or wholly dependent on such aquifers.

ISSUE 5-14: The statement that "Leaching of the reclaimed spoils materials would increase the dissolved solids concentrations of ground water in the mined areas two to three times premining levels" is an unwarranted "worst case" assumption. It does not follow that a three-fold increase in dissolved solids concentration in spoils leachate will cause a corresponding change in adjacent aquifers unless the leachate is the sole source of recharge.

RAISED BY:

Wayne E. Sowards; Utah International, Inc. (Letter 38)

RESPONSE: Experience to date indicates that a two to three times increase in dissolved solids concentration over premining levels can be expected in the reclaimed spoils aquifer in the mined areas as an average and not on a "worst case" basis (see Section 4, WATER RESOURCES, GROUND WATER, CHANGES IN WATER QUALITY). The analysis concludes that "degradation of water quality in areas adjacent to reclaimed spoils is expected to be a slow process, requiring centuries to become significant more than a few hundred feet from reclaimed mine areas."

ISSUE 5-15: The document fails to consider the cumulative effects of development on ground-water quality in regard to past and proposed future leasing to meet regional leasing targets.

RAISED BY:

Craig I. Thompson (Letter 53)

RESPONSE: Impacts on ground-water quality, both past and future, should be very local, requiring centuries to become significant more than a few hundred feet from reclaimed mine areas (see Section 4, WATER RESOURCES, GROUND WATER, CHANGES IN WATER QUALITY). Accordingly, no cumulative impact on ground-water quality as a result of coal development is expected in either the North Platte or Yampa watersheds.

ISSUE 5-16: Water-quality data from the spoils aquifer at the Energy Fuels mine may not be representative of water-quality degradation as a result of coal development in the region because Energy Fuels appears to be doing a markedly more careful job of reclamation than other mines currently operating in the vicinity.

RAISED BY:

Sarah Branson; Sierra Club (Letter 19)

RESPONSE: Research by Colorado School of Mines Research Institute and Engineering Enterprises, Inc. (1976) clearly shows that the dissolved solids concentration and dominant ions in reclaimed spoils aquifers is dependent on the minerology of the overburden materials and not on reclamation practices. Data from mines in Montana, Wyoming, and Colorado support the tentative conclusion that dissolved solids concentrations in spoil waters will average about two to three times those in the undisturbed coal aquifers.

SUBJECT: SALINITY AND WATER-QUALITY STANDARDS

ISSUE 5-17: Increased dissolved solids concentrations during periods of low flow contemplated in the cumulative analysis are questioned because runoff is the principal source of salts and little if any runoff occurs during periods of low flow.

RAISED BY:

Wayne E. Sowards, Utah International, Inc. (Letter 38)

RESPONSE: Water quality data collected by the U.S. Geological Survey and published annually as water-data reports for the river basins included in this analysis clearly show that dissolved solids concentrations (salinity) consistently increases as discharge decreases and the source of the water in the streams is dominantly from ground-water discharge. Thus the primary source of high dissolved solids concentrations (salinity) in the surface-water systems is from leaching of rocks at depth by ground water, which eventually discharges into the streams and rivers, and not from surface runoff.

ISSUE 5-18: What assumptions were used in the salinity analyses?

RAISED BY:

Brad Klafehn (Letter 37)

RESPONSE: Assumptions used in the salinity analyses are described in Appendix B, COMPUTATION OF CHANGES IN SALT LOAD AS A RESULT OF LEASING AND DEVELOPMENT OF NEW FEDERAL COAL.

ISSUE 5-19: The salinity standard used for the Colorado River at Imperial Dam should be clarified.

RAISED BY:

Robert J. Shukle; Colorado Department of Health, Water Quality Control Division (Letter 2)

RESPONSE: See text revision Section 4, WATER RESOURCES, INCREASED SALINITY OF RECEIVING WATERS DOWNSTREAM.

ISSUE 5-20: Will the combined impact of Federal oil shale leasing, power plants, synfuel plants, and coal development completely overwhelm water-quality standards?

RAISED BY:

Sandra Holliman; Engineer (Letter 7)

RESPONSE: The No Action Alternative presents a cumulative analysis of impacts to water resources from all anticipated development in the North Platte and Yampa watersheds other than leasing of new Federal coal. This analysis, however, does not include oil shale or synfuel development inasmuch as no such actions are currently planned in either of these watersheds during the time frames addressed.

The cumulative analysis shows that water-quality standards will be significantly impacted only in the lower Colorado River where the adopted standard of 879 mg/L dissolved solids concentration will be exceeded by an estimated 167 mg/L without the development of new Federal coal (see Section 4, WATER RESOURCES). At maximum development of new Federal coal, the increase in salinity at Imperial Dam wouild be only about 0.18 mg/L. This small increase in itself would not be detectable by standard sampling procedures. It is significant only because of the magnitude that the adopted standard will be exceeded under the No Action Alternative.

ISSUE 5-21: The validity of the "worst case" approach to appraising the significance of impacts is questioned because the results present an overly pessimistic interpretation of impacts. The "worst case" assumption that concentrations in leachate from reclaimed spoils reaching the streams would increase threefold over premining levels and ground-water discharge from the spoils aquifers would increase 25 percent is thought to be unrealistic in light of the analysis presented.

RAISED BY:

Wayne E. Sowards; Utah International, Inc. (Letter 38)

RESPONSE: The "worst case" approach was used in the appraisal of impacts to water resources to emphasize that even under such extreme conditions the magnitude of the impacts would be generally insignificant (see Section 4, WATER RESOURCES, SURFACE WATER, INCREASED SALINITY OF RECEIVING WATERS DOWNSTREAM).

6

VEGETATION

SUBJECT: RECLAMATION

ISSUE 6-1: The draft states it will take 20-50 years to restore usable wildlife habitat which is a worst case assumption while industry feels it will only take 5-10 years.

RAISED BY:

Wayne E. Sowards; Utah International Inc. (Letter 38)

RESPONSE: The 20-50 years for restoration of wildlife habitat is a worst case assumption. We agree that grass and some sagebrush will return in 5-10 years in some areas, but the assumption was made for the entire study area. Also, we are talking about critical wildlife habitat and the time frames needed to restore this critical habitat to a condition similar to premining. This will take 20-50 years depending on climate and protection of new plants. As far as rank dense stands not being suitable for much use, we agree, but most of the tracts in the study area contain shrub communities that the Colorado and Wyoming state wildlife biologists have deemed critical winter range for big game. Time needed to restore this habitat will take 20-50 years according to our studies and current research.

ISSUE 6-2: The draft concludes that companies will use only a few native species for revegetation with reestablishment of native species dependent on natural succession.

RAISED BY:

Utah International, Inc. (Letter 38)

RESPONSE: The use of native seeds in reclamation is becoming much more prevalent but it is still a fact that native seed sources are scarce, germination poor, and survival poor. Also over 70 percent of the tracts are private surface and a waiver from OSM regulations requiring restoration to native vegetation can be obtained by the surface owner.

ISSUE 6-3: The Federal action would result in the destruction of existing vegetative ecosystems.

RAISED BY:

Utah International, Inc. (Letter 38)

RESPONSE: The wording is probably a little harsh, but we still feel that once a vegetative ecosystem is disturbed it is impossible to create an exact replica. We do agree that a similar system can be established, but the exact ecosystem will be lost forever.

ISSUE 6-4: Native seed source would be irretrievably lost due to the Federal action.

RAISED BY:

Utah International, Inc. (Letter 38)

RESPONSE: The phrase that native seed sources would be irretrievably lost pertains to the loss of individual native plants. Once that plant is destroyed by disturbance, it loses the potential to supply additional native plants and would result in a loss of genetic base.

SUBJECT: THREATENED AND ENDANGERED PLANTS

ISSUE 6-5: The BLM should request consultation from the Natural Areas Program on species of plants which were discontinued from the proposed list (November 10, 1979).

RAISED BY:

Carse Pustmueller; Colorado Natural Areas Program (Letter 58)

RESPONSE: In compliance with BLM policy, the only plants that can legally be protected are the four cacti. We have contacted the U.S. Fish and Wildlife Service about the proposed list expected this fall; their response is that the plants will not have the protection of the Threatened and Endangered Species Act of 1973 nor come under the Section 7 consultation process. Therefore, BLM has no legal way to require committed mitigation but will request uncommitted mitigation on all the proposed plants outlined in the Environmental Statement. The Colorado Attorney General's Office has also indicated the state does not have the authority to regulate commerce of T/E plants under state law.

This does not mean the BLM will not try to protect the proposed plants. We will request your consultation on the proposed plants and work with lessees on each tract to try and alleviate impact. A new BLM policy on proposed and rare plants should be out this fall. This policy will give

the BLM power to protect more plants which means most or all the plants you listed will come under legal protection before lease time. Once we have received this policy, we will work up a memorandum of understanding with your office and utilize the steps you have outlined.

ISSUE 6-6: The time frame required for restoration of the disturbed landscape (20-50 years) is considered excessive. Adequate reclamation could be accomplished in less than 20 years. Grassland could be reestablished within five years and shrub types within 12 years.

RAISED BY:

David Preston; Rocky Mountain Energy Co. (Letter 39)

RESPONSE: The time frame of 20-50 years for restoration of the disturbed landscape is a regionwide figure including the vegetative types such as aspen stands in Colorado which will take a longer time to reclaim than the vegetative types occurring on the areas proposed for mining in Wyoming. The impacts on Wyoming tracts are based on a 20-year reclamation time frame which could range from 15-25 years after plant reestablishment on mined lands.

ISSUE 6-7: RME generally agrees with DEIS environmental description; however, sagebrush per acre/year should be 0.5 tons rather than 1.8 tons.

RAISED BY:

David E. Preston; Rocky Mountain Energy Co. (Letter 39)

RESPONSE: Sagebrush per acre/year figure used in DEIS is an average regionwide. Site-specific figures for tracts considered in Wyoming would be less.

ISSUE 6-8: Protection of riparian habitat by Executive Orders 11988 and 11990 is a BLM mandate and no Federal action can violate those orders.

RAISED BY:

Robert H. Shields; USDOI, Fish & Wildlife Service-Colorado Utah Area (Letter 26)

RESPONSE: The tracts will be reevaluated at mine plan stage and all riparian areas will be protected on Federal land. The tracts are over 60 percent private surface, so depending on mine plans and surface owner consultation, some acres of riparian habitat could be lost. The Executive Orders only cover Federal surface and do not protect private surface.

7

WILDLIFE

SUBJECT: CRITICAL HABITAT

ISSUE 7-1: OSM regulations require sedimentation dams which form ponds and replaces lost aquatic habitat and watering facilities on mined areas.

RAISED BY:

Wayne E. Sowards; Utah International (Letter 38)

RESPONSE: We agree, in part. Where replacement of drinking water for wildlife needs is the major consideration, replacement probably will occur on many tracts. Replacement in kind does not always occur where previously undisturbed aquatic habitats containing native vegetation and animal life are replaced by sterile clay bottomed detention ponds. Furthermore, on flat terrain as in Wyoming where no drainages occur and sedimentation dams are not required, real loss may occur if stock water developments are removed by mining.

ISSUE 7-2: Concern about too many critical wildlife habitats being disturbed.

RAISED BY:

Brad Klafehn (Letter 37)

Catherine Haug (Public Hearing Minutes 34)

Robert J. Golten; National Wildlife Foundation (Letter 48)

Sandra Holliman; Engineer (Letter 7)

RESPONSE: Big game critical winter ranges and migration routes will be disturbed. BLM intends to work with the state wildlife agencies to mitigate these losses where possible. Mitigating measures are suggested in the DEIS. Other specific mitigating measures are included in the Site Specific Analyses. Colorado Division of Wildlife believes losses can be mitigated and has developed site specific plans.

ISSUE 7-3: Pinyon-juniper, saltbush, greasewood and rock outcrops provide valuable wildlife habitat in Wyoming.

RAISED BY:

W. Donald Dexter; Wyoming Game and Fish (Letter 42)

RESPONSE: Comment noted; see changes in Table 3-12

SUBJECT: THREATENED AND ENDANGERED SPECIES AND WILD HORSES

ISSUE 7-4: Ten of the 16 tracts are not adequately studied for threatened and/or endangered species of plants or animals in general and there are indications that many of these tracts have not been visited by BLM's vegetation specialists.

RAISED BY:

John Wiener; Sierra Club/Friends of the Earth (Letter 5)

Robert G. Golten; National Wildlife Federation (Letter 48)

RESPONSE: Section 7 consultation (Endangered Species Act) for black footed ferrets and bald eagles on the five Wyoming tracts has concluded that coal leasing is not likely to jeopardize the continued existence of these species (Letter from Regional Director, USFWS, Region 6, Denver dated February 22, 1980). Threatened or endangered plants were inventoried in 1979, and none were found to occur.

In Colorado, formal consultation was completed with the issuance of USFWS biological opinion dated July 25, 1980. State T&E species are cleared by Colorado Division of Wildlife letter dated July 16, 1980. These letters are included in the FEIS. The proposed leasing action is not likely to jeopardize continued existence of T&E species in Colorado.

ISSUE 7-5: Endangered species of fish in the Yampa River should not take a back seat to increased coal development.

RAISED BY:

Pat Thompson; Yampa Valley Action Group (Letter 20)

Roger L. Williams; Environmental Protection Agency (Letter 54)

RESPONSE: U. S. Fish and Wildlife Service and Colorado Division of Wildlife have been consulted regarding these fish. Federal leasing will not jeopardize their continued existence. New data now shows that sewage pollution will not be a threat as stated in the DEIS. The FEIS contains this new data and reassessment (Water Resources and Wildlife).

ISSUE 7-6: T&E species of wildlife can be evaluated.

RAISED BY:

W. Donald Dexter; Wyoming Fish and Game (Letter 42)

RESPONSE: T&E species can be and have been evaluated and subsequently cleared by memorandum of February 28, 1980, from the Regional Director Region 6 of the U. S. Fish and Wildlife Service to the BLM State Director of Wyoming.

In Colorado formal consultation was completed with the issuance of USFWS biological opinion dated July 25, 1980. State T&E species are cleared by Colorado Division of Wildlife letter dated

July 16, 1980. These letters are included in the FEIS. The proposed leasing action is not likely to jeopardize continued existence of T&E species in Colorado.

ISSUE 7-7: Concerns have been raised about: (1) The number of wild horses in the EIS area. (2) Alternatives including the presence of wild horses. (3) Analysis of impacts on wild horses from mining. (4) The rationale for the MFP decision to remove wild horses from the checkerboard area.

RAISED BY:

Kathryn M. Cushman; Wild Horse Organized Assistance (Letter 28)

RESPONSE: The proposed action and alternatives of this EIS are in accordance with the Bureau's land use plans covering the EIS area. The Hanna area has no wild horses. In the most recent planning update (Overland 1976) the Multiple Use Recommendation was to "remove all wild horses from the checkerboard area" which includes the Red Rim - China Butte area.

The rationale for this decision is based on the pattern of ownership of public, private and state lands which is frequently referred to as a checkerboard. The Red Rim - China Butte area is 55 percent private and state ownership and 45 percent public lands. These different holdings cover the land in a checkerboard fashion.

The landowners in this area have requested the removal of wild horses from the checkerboard. The decision in the MFP was based on the request of these landowners, who provide about one half of the forage for the horses, and the recognition that "this situation makes management of wild horses extremely difficult...(because) horse management in this situation would require cooperative agreements with landowners. These could not in all probability be obtained."

There are more than 23 horses in the EIS area. Page 12 in Part II of the EIS is a site-specific matrix for China Butte. The 23 horses for this area are based on a density of .9 horses per square mile, not .0015 horses per square mile. This matrix also states that the number of horses is irrelevant to the analysis because the horses will be removed from this area regardless of whether mining occurs or not. Since the horses will be removed, because of the MFP decision, independent of any mining activity, it is not necessary to have alternatives including their presence.

No wild horses occur on any tracts or within the wildlife analysis area in Colorado. Wild horses do occur 30 miles west of the Lay Tract, but would not be impacted by this proposed action.

SUBJECT: UNSUITABILITY CRITERIA

ISSUE 7-8: Unsuitability Criteria for wildlife were not applied or were incorrectly applied to the proposed lease tracts.

RAISED BY:

Jack R. Grieb; Colorado Division of Wildlife (Letter 11)

Robert H. Shields; U. S. Fish and Wildlife Service (Letter 26)

Johanna H. Wald; Natural Resources Defense Council, Inc. (Letter 30)

Catherine Haug; National Wildlife Foundation (Public Hearing Minutes 34)

Brad Klafehn (Letter 37)

Robert J. Golten; National Wildlife Foundtion (Letter 48)

Sarah Branson; Sierra Club (Letter 19)

RESPONSE: All criteria pertaining to wildlife were applied. Required consultations with U. S. Fish and Wildlife Service and Colorado Division of Wildlife are now complete (see Wildlife section of FEIS). All Colorado tracts are cleared for leasing. They contain no unsuitable areas.

At the time the DEIS was filed, portions of the Wyoming tracts were in an "acceptable pending further study" status under the Management Framework Plan Supplement for the proposed coal areas. These areas were placed in this status pending: final consultation with other appropriate Federal agencies and the state of Wyoming on application of several of the criteria; and the analysis of specific impacts in the site specific analysis and regional EIS. Studies have been

initiated on tract revegetation, antelope migration, and sage grouse. These studies are presently ongoing.

ISSUE 7-9: The DEIS states that much of the Wyoming data is "acceptable pending further study" and that further data will appear in the FEIS.

RAISED BY:

Sarah Branson; Sierra Club (Letter 19)

RESPONSE: Portions of the Wyoming tracts are classified as "acceptable pending further study." Data presented in the DEIS is the best currently available. The data itself is not classified as "acceptable pending further study."

ISSUE 7-10: The DEIS has not shown evidence that the sharp-tailed grouse near the Pinnacle Tract will be severely affected by coal mining.

RAISED BY:

Gerald W. Grandey; Energy Fuels Corp. (Letter 36)

RESPONSE: The Colorado Division of Wildlife considers the sharp-tailed grouse to be a species of high interest. Unsuitability Criteria 15 provides for excluding sharp-tailed grouse dancing grounds from surface mining. Using available data the area within one-half mile of the dancing ground was declared unsuitable and cannot be mined unless an exception to the criteria can be applied. If new data exists, this designation can be reviewed.

SUBJECT: RECLAMATION OF WILDLIFE HABITAT

ISSUE 7-11: The assumption that all disturbed lands will be unavailable for wildlife use throughout the analysis years is invalid. It will not take 25 years to restore any usable wildlife habitat.

RAISED BY:

Wayne E. Sowards; Utah International, Inc. (Letter 38)

David E. Preston; Rocky Mountain Energy Co. (Letter 39)

RESPONSE: Aspen, mountain shrub, and riparian habitats would require 20 years to reclaim. Considering conditions throughout the GR/HF region this is believed reasonable. Certainly areas with better soils and greater precipitation would reestablish faster. Transplanting shrubs would speed the process. The timeframe of 20 to 50 years for restoration of the disturbed landscape is a region-wide figure which includes the vegetative types in Colorado which will take a longer time to reclaim than the vegetative types occurring on the areas proposed for mining in Wyoming. The impacts on Wyoming tracts are based on a 20 year reclamation time frame, which could range from 15 to 25 years after plant reestablishment on mined lands.

Not all wildlife would be excluded. The wildlife analysis emphasizes impacts that will occur upon key species and habitats. Big game winter ranges are of prime concern and would not be returned to full productivity within the analysis years through 1995. It is true that rodents, birds, and predators often rapidly repopulate areas reclaimed in grass.

ISSUE 7-12: Treatment of the probability of reclamation success as it affects wildlife is inadequate.

RAISED BY:

Robert J. Golten; National Wildlife Federation (Letter 48)

Johanna H. Wald; National Resources Defense Council (Letter 30)

RESPONSE: The wildlife analysis assumes that no reclamation of critical habitats will occur during the analysis period through 1995. All habitat and animal loss figures presented are based on the number of acres that will be disturbed without reclamation. Long term wildlife productivity will decline, if reclamation fails. This is stated in the FEIS.

ISSUE 7-13: Compliance with OSM regulations would prevent reclamation of important wildlife habitats such as critical winter ranges. Topographical features of these habitats will not be reconstructed under OSM.

RAISED BY:

John Wiener; Sierra Club/Friends of the Earth (Letter 5)

RESPONSE: Slope, aspect, drainages and other features affecting microclimate and vegetation growth are important components of critical habitats. OSM regulations provide for the reconstruction of these features. Technical feasibility may limit success. BLM must assume compliance with current OSM regulations.

SUBJECT: MITIGATION

ISSUE 7-14: Opportunities exist to integrate wildlife mitigation into ongoing livestock grazing programs.

RAISED BY:

Roger L. Williams; Environmental Protection Agency (Letter 54)

RESPONSE: This may be possible and will be investigated.

ISSUE 7-15: If Red Rim/China Butte tracts are determined to be acceptable then the mitigation measures as presented in the DEIS will not alleviate or mitigate wildlife impacts or impacts on affected landowners. Mitigation should involve affected landowners, mineral owners, Wyoming Game and Fish, and the mining companies.

RAISED BY:

David S. Moody; Wyoming Game and Fish (Public Hearing Minutes 50)

John MacPherson (Letter 23)

Robert H. Shields; Fish and Wildlife Service (Letter 26)

RESPONSE: Specific mitigating measures (i.e. lease or mine plan stipulations) to alleviate the length and/or magnitude of loss of crucial habitat and impacts on affected landowners will be developed if the committed tracts are leased. Specific mitigation will be based on the land use decisions, environmental assessment, and mine plan review. Mitigation will be developed with participation by Wyoming Game and Fish, mining companies and the affected landowners.

ISSUE 7-16: It has been recognized that:

(1) Mining plans must be developed in the manner that will minimize disturbance areas.

(2) Grazing regimes must be adjusted to allow for the support of both livestock and wildlife.

(3) Reclamation plans must be designed which accommodate the needs of wildlife as well as livestock.

(4) Mitigation measures to meet the short-term needs of wildlife such as supplementary feeding must be evaluated and defined.

RAISED BY:

Clark Bolser; Rocky Mountain Energy (Letter 50)

RESPONSE: The measures listed above have been discussed during the land use planning process. Should leasing occur, they will be evaluated in the environmental assessment for the mine plan review process.

ISSUE 7-17: It is unwise to completely eliminate big game use of newly reclaimed areas.

RAISED BY:

Jack R. Grieb; Colorado Division of Wildlife (Letter 11)

RESPONSE: The mitigating measures to exclude livestock and big game from newly reclaimed areas was suggested by Wyoming BLM. Other methods may be more appropriate in Colorado.

SUBJECT: DATA DEFICIENCIES

ISSUE 7-18: Tables pertaining to Round Bottom didn't have any data.

RAISED BY:

Louise Miller (Public Hearing Minutes 34)

RESPONSE: The only tract in the Round Bottom Area is Bell Rock. The Site Specific Matrix for Bell Rock in Part II of the DEIS, P. 135, contains some "unknowns." New data is available to clear these unknowns. Since Bell Rock will be an underground mine, little surface disturbance will occur and thus, minimal adverse impact on wildlife.

ISSUE 7-19: In the Iles Mountain tract breakdown, wildlife was not mentioned at all.

RAISED BY:

Kathryn M. Cushman; Wild Horse Organized Assistance (Letter 28)

RESPONSE: Wildlife was included for this tract in the DEIS, Site Specific Analysis Matrix.

ISSUE 7-20: Latilong studies were not given "full justice" and checklists of species should be included.

RAISED BY:

David M. Armstrong; University of Colorado (Letter 35)

RESPONSE: The Latilong studies are good sources and readily available to most persons truly interested in impacts upon nongame. They were used extensively in the wildlife analysis. Checklists of species occurrence have not proved valuable to most readers. Page limitations now imposed upon EIS's have forced inclusion by reference only.

ISSUE 7-21: Wildlife related studies for Red Rim are far from complete. Conclusions based upon preliminary data must be viewed as subject to error. These studies should be continued to reach reliable conclusions. If Red Rim is leased and mining takes place, wildlife populations and habitat should be closely monitored to determine the accuracy of the anticipated impacts described in the FEIS.

RAISED BY:

Larry Irwin; University of Wyoming (Letter 24)

Dave Moody; Wyoming Game and Fish (Letter 50)

RESPONSE: The impact analysis and conclusions were not based on the wildlife studies now in progress. Larry Irwin (Assistant Professor of Zoology, University of Wyoming) has stated that Red Rim could be within an important antelope migration route. The impact analysis only observes that if the tract is within an important migration route, then mining could interfere with antelope migration. The monitoring of populations and habitat will continue to the extent possible under funding levels provided by the cooperators whether or not the tract is leased and mined.

ISSUE 7-22: The source of habitat losses under the No Action Alternative is unclear. Explanation is needed to support this high level of disturbance without the proposed action.

RAISED BY:

Robert H. Shields; U. S. Fish and Wildlife Service (Letter 26)

Robert J. Golten; National Wildlife Federation (Letter 48)

RESPONSE: We agree. The text has been revised to include more explanation. This appears in Section 2 under NO ACTION ALTERNATIVE.

ISSUE 7-23: Wildlife data is not current.

RAISED BY:

David S. Moody; Wyoming Game and Fish (Public Hearing Minutes 50)

RESPONSE: All wildlife data used is the best available data. Application of the Unsuitability Criteria necessitated updating wildlife data through field survey, literature review and coordination with U.

S. Fish and Wildlife Service, and state wildlife agencies. The Site Specific Analysis prepared for each tract contain these data. Field work has continued to the present to verify wildlife data.

ISSUE 7-24: Data is lacking in Table 2-1, Alternative Matrix. We were not able to find any statements of impacts on threatened or endangered species.

RAISED BY:

Sarah Branson; Sierra Club (Letter 19)

RESPONSE: This table has been revised in the FEIS. The wildlife portion of this matrix is as complete as possible. Acres of habitats lost and numbers of animals lost are given along with ratings of expected impact significance for all elements. T/E species would not be jeopardized (USFWS and Colorado consultation).

SUBJECT: ANALYSIS DEFICIENCIES

ISSUE 7-25: Document is not a detailed analysis of cumulative impacts of Wyoming portion of Green River/ Hams Fork Coal Region such as:

No consideration for other coal development.

No data for wildlife losses in Wyoming.

Document provides only two alternatives for Wyoming, total leasing or no leasing.

RAISED BY:

W. Donald Dexter; Wyoming Game and Fish (Letter 42)

RESPONSE: Cumulative impacts of Carbon Basin and coal development not dependent on new Federal leasing are assessed in the No Action Alternative. Cumulative wildlife losses, thru 1995, from leasing the five Wyoming proposed tracts are included in the wildlife portion of the DEIS. The alternative combinations of lease tracts to be assessed in the regional EIS were determined by the Regional Coal Team.

ISSUE 7-26: Wyoming Game and Fish takes exception to definition and determination of wildlife impacts in Table 4-21 which assigns classification of "minor impacts" to the Wyoming tracts.

RAISED BY:

W. Donald Dexter; Wyoming Game and Fish (Letter 42)

RESPONSE: Based on figures used in the analysis summarized in Table 4-21 of the DEIS, the impacts identified are minor. Based on our analysis there will be locally significant wildlife losses within the DAU's involved. Regional populations would, however, over the long term, maintain the current stable or increasing trend.

ISSUE 7-27: In light of the checkerboard land ownership pattern in Wyoming it is highly unlikely that coal development will occur with or without Federal coal leasing. Therefore, the estimated impacts under the No Action Alternative in Wyoming are too high.

RAISED BY:

W. Donald Dexter; Wyoming Game and Fish (Letter 42)

Robert J. Golten; National Wildlife Federation (Letter 48)

RESPONSE: The coal development depicted in the DEIS for Wyoming is the result of mining operations requiring no new Federal leasing and not an assumption that private coals will be developed without Federal leasing. The impacts associated with the No Action Alternative reflect these operations.

ISSUE 7-28: Wyoming did not use DAU's but used regional analysis to analyze wildlife impacts.

RAISED BY:

W. Donald Dexter; Wyoming Game and Fish (Letter 42)

RESPONSE: Data Analysis Units as well as planning unit areas and site specific analysis areas are used in the analysis where appropriate for portraying the significance of impacts on wildlife within these defined areas.

ISSUE 7-29: Disagrees with Table 4-21--magnitude of impacts will certainly be different between No Action and Maximum Production.

RAISED BY:

Jack R. Grieb; Colorado Division of Wildlife (Letter 11)

Robert H. Shields; U. S. Fish and Wildlife Service (Letter 26)

RESPONSE: We agree. Baseline and alternative data have been reevaluated in view of current growth projections. These data have resulted in changes in magnitude of impacts. The GUIDE TO THE EIS, and Section 2 and Tables 4-16 through 4-21 reflect these new data. Table 4-21 is intended to be a summary of cumulative impacts and remains unchanged. For quantitative data on the Federal portion see Section 2 and the wildlife tables.

ISSUE 7-30: Indirect impacts of subdivisions, roads, and railroad spur construction upon wildlife were not acknowledged.

RAISED BY:

Johanna H. Wald; Natural Resources Defense Council (Letter 30)

W. Donald Dexter; Wyoming Game and Fish (Letter 42)

Robert J. Golten; National Wildlife Federation (Letter 48)

RESPONSE: These were included in the baseline (Table 2-3) as well as the analyses of alternatives. They appear as acres disturbed. These acres were the basis of the calculations of wildlife habitat and animal losses in Tables 4-16, 4-19, and 4-20.

ISSUE 7-31: Effects of oil and gas exploration, uranium activity, and other non coal development were not included in the cumulative analysis for wildlife.

RAISED BY:

John Wiener; Sierra Club/Friends of the Earth (Letter 5)

RESPONSE: The No Action Alternative baseline includes development other than coal. Oil, gas, uranium and other non coal-related development are included in the wildlife impact assessment. The acres-disturbed numbers presented in Table 4-16 reflect these projected losses to important wildlife habitats. Tables 4-19 and 4-20 are derived from these habitat losses and also include non coal impacts in the No Action Alternative. The total cumulative impact will be this baseline plus the Federal portion due to coal leasing.

ISSUE 7-32: Disagree that impacts will be so great without Federal leasing that the proposed action will make little, if any, difference.

RAISED BY:

Jack R. Grieb; Colorado Division of Wildlife (Letter 11)

RESPONSE: Baseline and alternative data have been revised to reflect current development and production projections. Wildlife tables and summary conclusions have been changed in the FEIS. With the Medium, Preferred, and Maximum Alternatives, leasing would add significantly to No Action wildlife impacts. See the definition of NO ACTION ALTERNATIVE in the GUIDE TO THE EIS in the beginning of Volume 1 of this EIS.

ISSUE 7-33: Assertions that affected species will be displaced to adjacent areas are suspect.

RAISED BY:

Johanna H. Wald; National Resources Defense Council (Letter 30)

Robert J. Golton; National Wildlife Federation (Letter 48)

RESPONSE: The affected species referred to are antelope, deer, and elk. These animals will be displaced from mined areas. The wildlife analysis assumes that displacement equals loss.

ISSUE 7-34: We disagree that the one-quarter mile buffer around disturbed areas will be unusable.

RAISED BY:

Wayne E. Sowards; Utah International, Inc. (Letter 38)

David E. Preston; Rocky Mountain Energy Co. (Letter 39)

RESPONSE: The one-quarter mile is an average and intended to better quantify the observed fact that wildlife use is curtailed to some degree around human activity areas. Some species are extremely intolerant of any activity up to one mile distant. Others will tolerate more distubance. Since variation among species and individuals is great and not entirely predictable, use of this general average appears valid within limitation. Much study on this subject is still needed.

ISSUE 7-35: The Wyoming Game and Fish Department believes BLM analysis of wildlife losses is misleading because losses are compared to regional populations and not to local populations within DAU's. Population losses developed by Wyoming Game and Fish Department personnel for Red Rim/China Butte are considered to be of major significance. These estimated losses are not the same as those presented in the regional DEIS.

RAISED BY:

Robert H. Shields; U. S. Fish and Wildlife Service (Letter 26)

W. Donald Dexter; Wyoming Game and Fish (Letter 42)

RESPONSE: DAU's (Data Analysis Units) were used in the impact analysis for Wyoming. Note that on page 190 of the DEIS the Baggs DAU is specifically referenced.

The cumulative analysis is in general agreement with Wyoming Game and Fish estimates for the Hanna area tracts (Seminoe II, Rosebud, and Medicine Bow). The wildlife impact analysis developed by the BLM for the Red Rim/China Butte tract differs from that of the Wyoming Game and Fish Department because the analysis was based on different assumptions and methods of calculation. Losses of pronghorn antelope on Red Rim were estimated by incorporating the following assumptions into a computer program.

(A) Crucial habitat size (20,400 acres)--the total size of the antelope crucial winter range.

(B) Population using the crucial habitat (1,875 head)--the total number dependent on the crucial habitat during a crucial winter.

(C) Probability of a crucial winter (0.5)--on the average, one winter out of two could be a crucial winter.

(D) Ratio of projected utilization to carrying capacity (1.15)--the pronghorn population would be 15 percent over the carrying capacity of the crucial habitat.

(E) Reclamation time (25 years)--time required to reclaim premining carrying capacity, beginning with initial seeding after mining.

(F) Lead time (8 years)--that period during which areas initially reclaimed are fenced to exclude big game and livestock in order to allow vegetation reestablishment.

(G) Crucial habitat disturbed annually (150 acres)--acres disturbed each year by surface mining.

(H) Life of mining activity in crucial habitat (23 years)--number of years disturbance would continue to occur on crucial habitat.

(I) Mine related facilities (1,500 acres)--acres of crucial habitat occupied by mine facilities for the life of the mine.

Basic assumptions and methods used to calculate losses for the Red Rim/China Butte tracts are described in a detailed analysis that has been supplied to the Wyoming Department of Game and Fish and available in the Rawlins District Office.

The BLM analysis represents a "worst case" situation. The assumptions can be considered variables which are subject to change if new information becomes available.

An important factor is the difference in estimates between Wyoming Game and Fish and the BLM of the total numbers of antelope dependent on the Red Rim crucial winter range. In a letter to BLM dated April 9, 1979, the Wyoming Djepartment of Game and Fish estimated that there were 600 to 1,200 antelope dependent on the winter range, based on aerial surveys during the winter of

1978-1979. Their latest analysis, based on the same aerial surveys, estimates that 2,500 to 3,000 antelope are dependent on the Red Rim winter range. The BLM analysis, based on the same information, estimates 1,875 antelope are dependent upon the Red Rim winter range. This is considered a maximum figure for assessing impacts because the antelope population has exceeded the carrying capacity of the winter range, as shown by significant over-utilization of shrubs during 1978 and 1979. The Wyoming Game and Fish Department is in agreement with the BLM that the population is over the carrying capacity of the winter range.

ISSUE 7-36: Human population projection used for wildlife assessment does not agree with that found in other sections of the DEIS.

RAISED BY:

Robert H. Shields; U. S. Fish and Wildlife Service (Letter 26)

RESPONSE: The analysis area for wildlife is smaller than that used by economics and sociology. The human population projection for wildlife includes only those people within the Williams Fork Planning Unit in Colorado and the Southcentral Wyoming EIS area.

ISSUE 7-37: Wildlife habitat and wildlife population losses indicated in the DEIS are irreversible and irretrievable.

RAISED BY:

Jack R. Grieb; Colorado Division of Wildlife (Letter 11)

RESPONSE: Under OSM regulations disturbed habitats will be reclaimed. Although land use changes are possible, we believe much mined land will remain available to wildlife and will not be irreversibly or irretrievably lost. Subdivisions, roads, railroads, and surface facilities remaining after mining would result in permanent habitat loss. The numbers of animals lost due to the proposed action would not eliminate breeding populations. Reproduction could replace lost animals. Some genetic traits may be lost permanently.

ISSUE 7-38: The statement that adverse impacts to wildlife will end with the life of a mine is highly questionable.

RAISED BY:

Johanna H. Wald; Natural Resources Defense Council (Letter 30)

RESPONSE: The wildlife analysis contained no such statement, and the intent of this analysis was to point out that impacts will extend beyond mine life. The Wildlife section of the FEIS states, (1) a minimum of 20 years will be required to reestablish sagebrush, mountain shrub, and riparian habitats, (2) acres unusable due to human activity would remain unusable throughout mine life and beyond, and (3) a cumulative loss in wildlife productivity is expected in the long-term, beyond mine life.

ISSUE 7-39: Animal-loss figures presented in Table 4-20 are incorrect; specifically, losses due to Federal leasing would be higher than shown.

RAISED BY:

W. Donald Dexter; Wyoming Game and Fish (Letter 42)

RESPONSE: These figures which have been revised are estimates based on the number of acres disturbed through direct and indirect impacts of mining throughout the Southcentral Coal EIS area. They are in general agreement with analyses done by Rawlins BLM using other methodologies. We feel they represent the true losses as well as they can be predicted given imperfect knowledge of the future. Antelope losses due to Federal leasing will be 22 percent of the cumulative total in 1995.

SUBJECT: OTHER WILDLIFE ISSUES

ISSUE 7-40: Estimates of deer lost due to vehicle collisions are far too low.

RAISED BY:

Bill Perry; Rancher (Letter 31)

RESPONSE: They may be on a regionwide basis. The figures presented in Table 4-17 under Average Known Killed are the averages of actual numbers counted on these road segments in 1976 and 1977 by Colorado Division of Wildlife (DOW). More recent data being compiled may show increases. DOW has indicated that for each deer known killed, at least one more is hit and not reported. The Minimum Estimated Kill figures in Table 4-17 reflect this by being twice what would be estimated if only known kill averages were considered.

ISSUE 7-41: Factors other than traffic volume influence highway mortality of wildlife.

RAISED BY:

David E. Preston; Rocky Mountain Energy Co. (Letter 39)

RESPONSE: We agree. Response to highways will vary with species and individuals. Certainly animal density is important. Data does show a correlation between traffic flow and deer mortality. More study is needed to develop better models.

ISSUE 7-42: Land use changes have had a profound impact on wildlife.

RAISED BY:

Jack R. Grieb; Colorado Division of Wildlife (Letter 11)

RESPONSE: We agree that conversion of natural lands to urbanization, agriculture and industry has eliminated habitat and lowered potential wildlife production.

ISSUE 7-43: Increasing human population will not result in wholly detrimental effects upon wildlife. The purpose of wildlife management is to provide recreation for people.

RAISED BY:

David E. Preston; Rocky Mountain Energy Co. (Letter 39)

RESPONSE: Recreational use is only a small part of BLM wildlife management. Many nongame species are not used recreationally, and are not benefited from increased human population. Loss of habitat, harrassment, poaching, and indiscriminate shooting do increase with population growth, and are adverse impacts. Benefits which may accrue are discussed under Recreation.

ISSUE 7-44: Sage grouse are high interest species in Wyoming, as well as economically valuable.

RAISED BY:

W. Donald Dexter; Wyoming Game and Fish (Letter 42)

RESPONSE: We agree sage grouse are high interest species in Wyoming, as well as economically valuable. The DEIS depicts cumulative impacts to sage grouse for Wyoming. I028

CULTURAL RESOURCES

SUBJECT: COMPLIANCE WITH 36 CFR 800

ISSUE 8-1: Failure to follow the procedures established for consulting the State Historic Preservation Officer with respect to eligibility to the National Register and with respect to determination of effect.

RAISED BY:

Louis S. Wall; Advisory Council on Historic Preservation (Letter 3)

Arthur O. Townsend; Colorado State Historic Preservation Officer (Letter 10)

Sarah Branson; Sierra Club (Letter 19)

Robert J. Arkins; Heritage Conservation and Recreation Service (Letter 25)

RESPONSE: The BLM acknowledges its responsibilities as stipulated in a "Programmatic Memorandum of Agreement Among the Department of the Interior, Bureau of Land Management, Office of Surface Mining Reclamation and Enforcement, and United States Geological Survey, and the Advisory

Council on Historic Preservation Regarding the Federal Coal Management Program" (36 CFR 800.8) and as effective on May 20, 1980. Under the stipulation of this agreement BLM is required: (1) to perform inventories for cultural resources; (2) to seek determinations of eligibility (36 CFR 63); and (3) to apply unsuitablity criterion #7 to properties identified during the inventory. Unsuitability criteria has been applied and consultation is ongoing. (See CULTURAL RESOURCES, Section 4).

Specific responses:

Colorado SHPO: BLM agrees that the proposed action of coal leasing requires compliance with 36 CFR 800.

Sierra Club: A letter from Colorado SHPO was included in the draft EIS as Appendix E and is reprinted here as Letter 69.

9

RECREATIONAL RESOURCES

SUBJECT: DISPERSED RECREATION

ISSUE 9-1: (1) Loss of hunter and fisherman expenditures should be substantial. (2) ...hunting and fishing economic value lost due to mining should be calculated.

RAISED BY:

Jack R. Grieb; Colorado Division of Wildlife (Letter 11)

Robert H. Shields; U.S. Fish and Wildlife Service (Letter 26)

W. Donald Dexter; Wyoming Game and Fish (Letter 42)

RESPONSE: No loss of hunting and fishing expenditures is anticipated as a result of new Federal coal leasing. As population increases, so will hunter and fisherman recreation days; thus, expenditures or revenue collected will increase.

In regard to estimated loss of deer, elk, and antelope as a result of habitat removal, the number lost would not be significant enough to diminish demand for license sales or related commercial expenditures. There may be a possible shift in hunting pressure; however, not to the point where the activity will decline, increases in activity days will still be realized within the assessed study region.

ISSUE 9-2: Demand for recreation has to be separated by state, not calculated by region. Increased hunting fees will do nothing additional to nonresident hunting participation. Participation was limited years ago when licenses were limited. To blame the loss of recreation resulting from mining on higher license fees and increased fuel costs is totally inappropriate and incorrect.

RAISED BY:

Donald W. Dexter; Wyoming Game and Fish (Letter 42)

RESPONSE: See Table 4-26B for activity day breakdown for Wyoming. The EIS does not state there will be a loss of recreation as a result of higher license fees, but does state a decrease in demand for permits will be evident, as realized in 1980 from nonresident applications.

Cost and availability of vehicular fuel does play a major role for visitation and distance traveled. Recreation emphasis may change to activities "closer to home," thus types of recreation activities may decrease and others increase, no loss of total recreation days are anticipated. See Section 3, Recreation, Dispersed, for assumption drawn as a result of increased fuel costs.

ISSUE 9-3: The DEIS states here that the projected 24 percent population increase in the region by 1987 will result in a decrease in the quality of recreation in the region. That seems logical enough, but

there are no conclusions put forward for this type of impact from the new leasing. It is hard for us to judge just what conflicts there are between recreation and coal lands--for example, are impacts direct or indirect--because the data presented do not allow secure judgement.

RAISED BY:

Sarah Branson; Sierra Club (Letter 19)

RESPONSE: These impacts were assessed in the following passage from the Recreation portion of Section 4 in the EIS:

> **The additional dispersed recreational demand from natural population and proposed coal leasing population growth would impact recreation, but only in terms of diminishing the quality of the recreation experience. The opportunity to engage in a particular activity would still be available. For anticipated increase of activity by alternative see Table 4-26. Impacts associated with the removal of accessible public land are not considered significant on a regional basis; however, two specific situations would create a notable local impact. The Wyoming proposed lease areas for all alternatives would remove approximately 33,000 acres of land that is accessible for public use; however, only 17,500 onsite acreage would actually be used for mining. This point should be scrutinized closely prior to actual lease.**
>
> **In the Colorado leasing areas, 2,700 acres of accessible public land would be removed from public use. One tract (Maximum Alternative only), Iles Mountain, contains 2,120 of those acres. On this tract public use is considered high; the primary recreation activity is hunting. Another associated impact is the degradation of aesthetic quality that would be created by the mining activity, affecting float boaters on the Yampa River. Table 4-27 illustrates the significance of impacts on a more site-specific basis for all the proposed lease areas.**

Impacts from new leasing are both direct and indirect; e.g., public land removed from recreation use and secondary population growth as a result of new mining, respectively. See Tables 4-26 and 4-27 for associated impacts.

ISSUE 9-4: Major factors determining quality of hunting are: quantity and quality of available habitat; the number of permits available, not economics and politics.

RAISED BY:

Robert H. Shields; U. S. Fish and Wildlife Service (Letter 26)

RESPONSE: Politics and economics are the prevailing factors of hunting quality. Quantity and quality of habitat, and numbers of permits available, are major aspects but more specific factors that dictate quality of hunting. Management decisions or big game management policy are often political in nature; the availability of funding for mitigation of poor or destroyed habitat is determined by economics. A partial inclusion of your comments may be noted in Section 4, under Recreation.

SUBJECT: URBAN RECREATION

ISSUE 9-5: The question of where the funds for recreational development and maintenance will come from and how funding would be administered is not addressed in the draft.

RAISED BY:

J. E. Pankonin (Letter 33)

RESPONSE: As stated in Section 4, under Recreation, Urban, funding must be provided by city, county, state and/or Federal agencies. Funding availability is determined on a year to year basis on revenues collected and grants to be provided. As mentioned in your comments, another viable method would be to form a recreation district to draw from the county's tax base. Information on other sources of funding should be available form the respective COG District.

SUBJECT: VISUAL RESOURCES

ISSUE 9-6: Wyoming Department of Environmental Quality has not allowed only simple planting of grasses on mine sites.

RAISED BY:

Donald W. Dexter; Wyoming Game and Fish (Letter 42)

RESPONSE: The sentence referred to has been changed to read: "...the first type of vegetation generally planted are grasses."

ISSUE 9-7: One of my biggest problems with this is the use of VRM, which uses visual resources rather than the usual land capability classification system. I feel this land capability classification system should be utilized. It takes into account the visual resource management, and it also takes into account several other things such as what is the land being used for and what are its potentials, which is the crux of the situation as far as reclamation goes.

RAISED BY:

David Porterfield; Arch Mineral Corporation (Letter 50)

RESPONSE: Under the new regulations of the Council on Environmental Quality, Visual Resource Management is to be considered a separate resource for analysis. As for other resource capabilities, refer to specific resource sections.

Past and present public use has primarily been hunting, where legal access is available. Livestock grazing and wildlife winter range would be considered the major nonpublic use of the proposed lease areas.

These activities are expected to continue in part during the mining process. Once reclamation has been completed, premining uses are anticipated to continue on public lands much in the same manner as we see it today.

ISSUE 9-8: The direct and indirect visual decrements from present coal mines is not adequately addressed in the EIS.

RAISED BY:

Sarah Branson; Sierra Club (Letter 19)

RESPONSE: The description of the environment referred to on page 57 is a general overview of the entire Green River/Hams Fork Coal Region which includes more land than the specific study areas identified in Sections 3 and 4. The recreation and visually aesthetic areas mentioned do exist within the region and are generally far removed from areas of coal mining activity.

The visual resources analysis in Section 4 indicates that there has been extensive energy related landscape disturbance within the study region, and also provides information on the visual sensitivity of these areas.

SUBJECT: WILDERNESS

ISSUE 9-9: How has BLM analyzed potential wilderness areas around or within the proposed Federal lease areas?

RAISED BY:

Roger L. Williams; Environmental Protection Agency (Letter 54)

RESPONSE: Within the study region, all BLM-administered lands have been inventoried for wilderness potential as directed under Section 603 of FLPMA. Completion of the initial inventory in 1979 indicated no potential wilderness areas within or adjacent to the proposed coal leasing areas. Specific criteria for inventory is available at your request.

10

SOCIAL AND SOCIOECONOMIC ENVIRONMENT

SUBJECT: DATA AND METHODOLOGY

ISSUE 10-1: Not enough information has been presented in the Alternative Matrix at the end of Section 2.

RAISED BY:

Sarah Branson; Sierra Club (Letter 19)

RESPONSE: The Summary Matrix is intended as a guide to the decision maker regarding choice of a Preferred Alternative, not an exposition of data. Data supporting the matrix are presented in Section 4.

There is, indeed, as commentor notes, a lack of sufficient data on social-structural and social-psychological impacts of demonstrably good enough quality to distinguish clearly among specific coal leasing alternatives.

ISSUE 10-2: The DEIS states incorrectly that leasing alternatives will affect the lives of individuals and social structures proportionately to population growth rates, whereas social and economic strains do not occur proportional to growth, but exceed it at an exponential rate. Most vicious is the slighting reference to the fact that local inflation has a devastating effect on the elderly and others on fixed incomes.

RAISED BY:

John Wiener; Sierra Club/Friends of the Earth (Letter 5)

Robert G. Demos; Colorado West Area, Council of Governments (Letter 46)

RESPONSE: We agree that social strains tend to increase at an exponential rate relative to population growth, as is discussed at appropriate spots in the text. The term "proportionately" refers to the ratio of one part to another, including exponential ratios, as was the meaning intended in the statement quoted.

With respect to handicaps imposed by energy boom development upon the elderly and others on low and/or fixed incomes the point is already strongly, though briefly, made in Section 3, "A CASE HISTORY ... " Energy development is probably not the primary cause of inflation for most communities, since actual living costs are little or no higher than similar communities elsewhere in the region, and are not out of line with general national trends. In some cases the opposite may be true: The entry of chain stores, fast food establishments, etc., may actually reduce such items as food and clothing prices. Housing, as noted elsewhere, is a very serious problem, and for low or fixed-income renters the problem may become acute. For those who own instead of renting, housing shortages inflate their home sales value and may thus permit at least limited participation in the local prosperity. It is obvious (and is well documented in many places, of course) that the poor and those on fixed incomes are most severely hit by inflation, and through it may be forced into drastic curtailment of social activities, loss of social space, and extreme physical, economic, and mental stress.

ISSUE 10-3: There was a very heavy reliance on already available data with no evidence of evaluation of the quality of those data, inadequate or missing information about data, assumptions, methods, and no clear definition of social impacts. Although it was very flattering to see such heavy reliance placed on my work, this was clearly labeled as exploratory and was not meant to be used as a theoretical or empirical foundation for Social Impact Assessment (SIA). I do not believe the Bureau of Land Management sociologist(s) working on this SIA are at fault. The constraints on this project, including a ridiculously short time to prepare the EIS, limited staff, and the inability to collect primary data, as well as the absence of theory and methods for SIA virtually guaranteed these results. The SIA did not fulfill BLM's own requirements. Although the National Environmental Policy Act does not define social impacts, the BLM Denver Office has developed a list of essential

"data elements" which is not accompanied by theoretical or empirical justification or methods for measurement. This SIA does not include many of these, and much of the information it does include is anecdotal at best.

RAISED BY:

Elizabeth Moen; University of Colorado (Letter 22)

RESPONSE: Unfortunately, the same practical problems facing sociologists preparing EIS discussed by Jobes in 1976 still are evident in 1980. EIS team sociologists are not able to do necessary sociological research within the policies set by OMB and BLM and within the time frames required for this EIS. It has therefore been necessary to draw upon whatever data are already available. These data often are either questionable on the basis of theoretical soundness, sampling and other methodological techniques, or interpretation, or are purely exploratory and thus not reliably generalizable.

For instance, as noted by this commentor, an overly-heavy reliance was placed on the Moen, et al., study, even though it was clearly labeled by its authors as exploratory and thus did not contain adequate objective confirmation of its most significant insights. But it was the best actual field study we could find for our study area relating specifically to most of the issues it addressed, and which laid even a modest theoretical foundation for its conclusions.

It was also necessary, due to space limitations and technical writing requirements established for this document, to refer only to sources, rather than summarizing their content, evaluating their assumptions, methodologies, and limitations of reliability and/or validity.

Regarding a clear definition for "social impacts," this deficiency can probably best be corrected here by stating that these specifically include those items discussed as social-structural or social-psychological; however, economic impacts (particularly those having to do with employment and income) are also social, as are certain aspects of recreation as dealt with in this EIS, land-use planning, etc. These are covered in separate sections of the EIS for convenience.

It should be noted that BLM has recently let a contract to a private organization for the structuring of social data needs and a limited amount of pertinent research. This, along with the new use of trained sociologists in preparation of EIS's, and the growing concern within the discipline itself over the poor quality of social data in these documents, will hopefully begin to improve such data and their uses for future environmental assessments.

Regarding the BLM internal requirements, this comment apparently refers to an effort being made by BLM and the U.S. Census Bureau to build a systematic collection and retrieval system for socioeconomic and other social data, for which a list of variables ("data elements") is being developed. The eventual computerized system will include the most complete information possible to obtain within Federal policy and fiscal restraints, for use by BLM or other agencies for various purposes. The variables list is not intended to be a standard, nor will it be built around any particular theoretical framework. The data are expected to be cumulative over time and the aim is to improve analytical and decision-making capabilities by BLM.

ISSUE 10-4: Conclusions about the significance of population growth rates were frequently based upon rather arbitrarily established thresholds.

RAISED BY:

Elizabeth Moen; University of Colorado (Letter 22)

RESPONSE: A 10 percent annual population growth rate as an approximate point at which social-structural change might produce breakdown conditions was chosen "arbitrarily" in the sense that it was a judgmental choice; however, this judgment was based upon references noted in which breakdown rates were estimated to be at 7 to 15 percent annually, and was taken as a reasonable compromise on the conservative side.

ISSUE 10-5: Turnover in population should be included. While the EIS identified unavoidable adverse impacts, it fails to mention the genuine social concerns developed in the earlier discussions. It is not evident why some impacts are "unavoidable" and some are not. Impacts are not unavoidable unless the predicted population dynamics are taken as given. Rates of growth, turnover, and change in the population can be adjusted. We seem to be locked into the idea that adverse impacts *will* occur and the only solution is to mitigate or cure the resulting problems. Curative

strategies are costly; they are not available to all; many problems are not curable. Another solution to negative impacts is through prevention of the impacts.

RAISED BY:

Elizabeth Moen; University of Colorado (Letter 22)

RESPONSE: See Table 4-37 in Final EIS; also see revisions in UNCOMMITTED MITIGATIONS: SOCIAL in Section 4, regarding suggested slow-down procedures for population growth. The commentor should refer also to definition for the difference between "committed" and "uncommitted" as explained in the GUIDE TO THE EIS at the beginning of Volume 1.

The term "unavoidable impacts" must naturally rest upon some set of assumptions, including, in this case, that the population dynamics will be as described. The assumptions used in turn color the consideration of mitigation measures. Cortese, ("Rapid growth and change ...," p. 7) describes deficiencies in impact statements which treat *symptoms* of social impacts (such as crime and mental illness) as if they were the social impacts themselves. He points out, "Such shortcomings in our definition and approach to social impact assessment have important implications for the ways in which we think about mitigation.... For example, the provision of human services in impacted communities, itself a difficult and expensive task ... might treat only the symptoms of what might be, if conceived of differently, *avoidable* impacts" (emphasis his). Thus, "unavoidable" adverse impacts can become avoidable if measures can be taken that prevent their occurrence. This is not, of course, always possible or practical, but it is always desirable.

ISSUE 10-6: Considering the important economic role that Rawlins serves in that part of Wyoming, it is safe to assume that Rawlins will experience the most absolute, as opposed to relative, effects of the leasing related impacts. The attention given to Rawlins can be described as extremely limited and highly generalized.

RAISED BY:

Warren G. White; Executive Department, State of Wyoming (Letter 41)

RESPONSE: The FEIS gives additional details on the socioeconomic impacts occurring in Rawlins. See revisions in Section 4 and Tables 4-36 and 4-37. Corrected population growth figures for Wyoming communities indicate that the expected impacts of new coal leasing on Rawlins would be greater than first estimated. It should be noted that percentages are a more appropriate measure of impact than are absolute numbers, since they control for size of town.

Data on anticipated facilities requirements for Rawlins and other Carbon County communities were received from the City of Rawlins and, to the extent possible, were incorporated into the fiscal impacts analysis.

SUBJECT: POPULATION DISTRIBUTION

ISSUE 10-7: Population predictions in DEIS sometimes vary with those made locally. Suggest Interior use data available through Carbon County Council of Governments to prepare FEIS.

RAISED BY:

David E. Preston; Rocky Mountain Energy (Letter 39)

RESPONSE: Population predictions are always problematic. Sources tend to be inconsistent and impossible to evaluate for relative validity. For this EIS, models were chosen for Colorado and Wyoming separately and as much information as was available was incorporated. (See data revisions in text.) It cannot be stated whether the projections will turn out to be more accurate than local/state estimates, but the data inputs and assumptions used are applied consistently for all the Wyoming communities (which is important for purposes of this EIS.) Planners should, of course, consider all possible estimates and decide which currently available projections are likely to prove most accurate. Planners are urged to consider the figures provided by the commentator as well as those presented in the FEIS.

ISSUE 10-8: Have leasing considerations taken into account other likely simultaneous energy developments? A great deal of activity other than more coal boom development is "reasonably foresee-

able'' in the region, and the discussion does not include the effects of oil and gas exploration, which will continue, and uranium activity in the Red Desert region of Wyoming.

RAISED BY:

Roger L. Williams; Environmental Protection Agency (Letter 54)

John Wiener; Sierra Club/Friends of the Earth (Letter 5)

RESPONSE: As shown in Table 2-3, non coal developments have been included in the baseline. Because analysis of specific baseline developments is not the purpose of this EIS, their individual socioeconomic impacts are not stated, although they are included in the totals. For your information, the following data are provided.

Baseline: Estimated Growth In Primary Employment over 1978 Level

SECTOR	1985	1987	1990	1995
Oil and gas	50	50	100	100
Oil shale	0	4,600	4,600	4,600
Other mining	100	200	300	300
Construction	5,600	2,000	−700	−700
Total	5,700	6,800	4,300	4,300

County	1985	1987	1990	1995
Moffat	100	100	200	200
Rio Blanco	2,400	3,400	3,300	3,300
Routt	100	100	200	200
Albany, Carbon, and Sweetwater	3,100	3,200	600	600
Total	5,700	6,800	4,300	4,300

The successive drop in construction employment is caused by: first, completion of present oil shale projects and second, completion of projected coal mine projects.

See revisions in discussion of population numbers, distribution, and growth rates, with their social-structural and social-psychological implications, in Section 4. Population projections are always problematic. See also discussion of THE NO ACTION ALTERNATIVE in the GUIDE TO THE EIS at the beginning of Volume 1.

ISSUE 10-9: Baseline population projections are understated. The EIS team should contact RMEC and Tri-State Generation and Transmission to ascertain the exact nature and commitment to the proposed synfuel and power generating plants. Special attention should be given to socioeconomic impacts these projects could have on Carbon and Sweetwater Counties of Wyoming.

RAISED BY:

Warren White; Wyoming Executive Department (Letter 41)

RESPONSE: The socioeconomic analysis for Wyoming was revised because the impacts resulting from the Carbon Basin, Hanna South, and Cherokee mines were inadvertently omitted from the baseline population projections. While these three mines are not currently operating, it can reasonably be assumed that they will come into production sometime in the near future. The baseline in the FEIS therefore includes impacts resulting from the operations of these three mines.

The Rawlins District contacted Tri-State Generation and Transmission on July 18, 1980, and ascertained that a site for the power generating plant has not been selected from four potential sites. Of these four only one, Cherokee, is within the GR/HF Coal Region. Even if Cherokee were the site selected the on line date is not projected until 1988. If the proposal should identify the Cherokee site, the next regional coal EIS for the region would be the place to address these impacts.

Regarding the proposed synfuels plant, Mr. Rick Andrews of the Denver Offices of Rocky Mountain Energy reports that a feasibility study presently in progress is to be completed early in 1982. If the decision is made to build the plant, the process of site selection, engineering designs, permits, etc., would then begin. In view of these uncertainties, we cannot consider this a potential facility. It should be noted, however, that should it become a reality, the plant would require several thousand construction workers (plus families and secondary population) over a 2-3 year period beginning about 1984, followed by no more than about 400 operations workers. Such a numerical difference will undoubtedly spell drastic construction impacts for any small communities nearby. This fact should be kept in mind by all parties concerned as project decisions are made.

ISSUE 10-10: The population projections are one of the most important components of an EIS. The DEIS does not provide the assumptions and methods underlying the population projections. The basic assumptions are extremely important to projections and, unless these assumptions are well grounded in theory and empirical reality, the results may be highly inaccurate. Economic-demographic input-output models require a great deal of specific data, yet no mention was made of these data or the assumptions of the model. Nor were the assumptions regarding the changes in the characteristics of the population noted. Gravity models have been found inaccurate to estimate the distribution of immigrants to rural areas.

RAISED BY:

Elizabeth Moen; University of Colorado (Letter 22)

RESPONSE The input-output model on which the demographic analysis is based was prepared by the Economics Department of Colorado State University. It covers the area of Moffat, Rio Blanco, and Routt Counties, Colorado and was prepared from local data as much as possible. CSU prepared a similar model for the Wyoming portion of the impacted area, covering Albany, Carbon, and Sweetwater Counties. A full description of the Colorado model and its assumptions is given in the publication by McKean and Weber, which is referenced in the bibliography and should be available through BLM's Colorado State Office in Denver.

The employment growth estimated by the I-O model was allocated to communities using a simple gravity model which took into account existing population and distance in terms of travel time. Because of the small local labor supply relative to the expected scale of development, it could be assumed that this employment would be mainly non local. Subjective estimates based on historic trends were used instead of the gravity model in Wyoming because of the different settlement patterns that were noted in your reference. As also stated in your reference, inclusion of trade centers in the gravity model might have improved the allocation, and this will be considered in future studies.

Because it is becoming common for more than one member of a household to work, employment was divided by a factor of 1.2 to derive estimates of number of households. Population was obtained by applying factors of 3.224 persons per household for construction and mining workers (derived from Wieland, Leistritz, and Murdock, *Characteristics and Settlement Patterns for Energy-Related Operating Workers in the Northern Great Plains* 1977) and 2.89 persons per household for secondary workers (U.S. average from 1970 Census).

Secondary employment multipliers were not used since the I-O model provided both primary and secondary employment estimates. Likewise, neither unemployment nor labor force participation rates were specifically used, population estimates being derived instead through the household factors described above.

SUBJECT: HOUSING

ISSUE 10-11: Housing is an issue of critical concern. Crucial to a baseline description is information on pre-boom, present and future costs of housing vis-a-vis an income projection for incoming workers.

Estimates of the number of assisted housing units required is also necessary for development and implementation of a housing strategy.

RAISED BY:

Robert G. Demos; Colorado West Area, Council of Governments (Letter 46)

John Wiener; Sierra Club/Friends of the Earth (Letter 5)

RESPONSE: The following figures are based upon these assumptions and data:

(1)Single-family: Purchase price $35,000-$80,000, less 10 percent down payment, 30-year loan at 14 percent; Property taxes: assessed value 30 percent of purchase price, 65 mills levy.

(2)Mobile home: $8,000-$23,000 purchase price less 10 percent down payment, 15-year loan at 17 percent interest; space rent $105 per month.

(3)Data from individual communities, Tables 3-24 and 3-25.

(4)Sources: Thomas Carr, Shelter America, Inc., Denver, Colorado, 1980, *Mobile Home Financing* (phone conversation); Glenda Martin, Rocky Mountain Realtors, Craig, Colorado, 1980, *Single Family Home Financing* (phone conversation).

RANGE OF PERCENT OF INCOME REQUIRED FOR HOUSING

Construction Workers:

Single Family 32-74

Multi-Family 11-38

Mobile Home 16-32

Mining Workers:

Single Family 24-55

Multi-Family 8-28

Mobile Home 12-24

Other Workers:

Single Family 51-118

Multi-Family 18-60

Mobile Home 26-51

Also, see Table 4-38 as revised.

Other data exist, but time has not permitted a total analysis of all aspects of housing, and not all available data are pertinent to the purposes of this EIS (pre-boom housing costs, for example). The data presented seem adequate to document the existence and nature of problems discussed; the additions suggested here would still not be sufficient to permit specific housing forecasts such as the number of assisted housing units needed by each community. It should be noted specifically that the EIS is a decision-making guide for Federal use only, and is not intended to be used for "development and implementation of a housing strategy," though it is most certainly hoped that the information provided in it will be accurate and helpful to communities in planning for projected impacts. Reference is made particularly to the lists of suggestions under UNCOMMITTED MITIGATIONS (Social and Economic) in Section 4.

ISSUE 10-12: There is a proper admission that socioeconomic impacts will be (and are already) severe without new leasing, but the data seem obscure to us and there seems not to be a discussion of mitigating measures. If the present housing shortage is bad enough, how can communities deal effectively with new leasing impacts?

RAISED BY:

Sarah Branson; Sierra Club (Letter 19)

RESPONSE: Mitigating measures are discussed in Section 4. Housing shortages exist in any rapidly-growing community and in general are dealt with by the private sector. Energy-impacted communities (as noted in Figure 3-4 and related text discussion) tend to develop a large quantity of temporary housing facilities. Severe overloads do become an extreme problem, as happened in recent years in Craig and Rock Springs (see photos in Section 3).

SUBJECT: INFRASTRUCTURE AND CAPITAL COSTS

ISSUE 10-13: The greatest need facing all the impacted communities is the need for new criminal-justice facilities to handle juvenile and adult crimes.

RAISED BY:

Bill Perry; Rancher (Letter 31)

RESPONSE: Some improvement in criminal-handling facilities would probably occur as criminal justice procedures are formalized and professionally trained personnel replace the more casual officials of the past. See discussion of institutional formalization in Section 3.

ISSUE 10-14: One issue is the loss of school time in Oak Creek due to noise levels caused by trains. The noise completely disrupts the classroom.

RAISED BY:

Bill Perry; Rancher (Letter 31)

RESPONSE: Section 3 indicates that train traffic between Craig and Bond (which includes Oak Creek) can be expected to increase from 4 to 30 trains per day. Thus, whatever inconvenience or disruption to classrooms is apparent at the present time would be greatly increased with new coal leasing. This is unfortunately an unavoidable adverse impact, barring a change of location for the school or a rerouting of the railroad, neither of which is likely to occur.

ISSUE 10-15: The site-specific summaries in Part II of the DEIS are misleading since in no section are short- and long-term needs for community facilities aggregated for each proposed alternative. A prime example of deficiencies in facility analysis is waste treatment facilities.

Another point of concern which requires attention relates to local financial capabilities. The discussion on local finances (p. 87) is admitted in the narrative to be inadequate.

RAISED BY:

Robert G. Demos; Colorado West Area, Council of Governments (Letter 46)

RESPONSE: Sewage treatment is considered among the community facilities needs, and is a major component of the capital requirements projected for Craig and Meeker. Estimates for individual facilities items were not included in the document because of the sheer bulk of the estimates (each item for each community for each alternative for each year), but are available in Craig District Office files. Table 5 in Appendix A gives the assumptions used for the analysis of community facilities and capital requirements. The purpose of the site-specific summaries is to describe the separate impacts of individual sites, whereas the aggregation of these impacts by alternative is the function of the EIS.

ISSUE 10-16: A range of data comparing health care facilities and health care personnel with national standards should have been given. BLM's personnel were given an absolutely inadequate period of time in which to prepare the statement, but these comments are about the statement, not abou t the failure of the staff to refuse to do an incompetent job under impossible demands.

RAISED:

John Weiner; Sierra Club/Friends of the Earth (Letter 5)

RESPONSE: The following available figures may be of interest:

Persons per M.D. as of 1978: (1)

U.S. (2)	Colo. (3)	Moffat Co. (3)	Rio Blanco Co. (3)	Routt Co.
171	572	883	5,200	1000

Persons per practicing R.N. (1977 nurses, 1978 population)

U.S. (2)	Colo. (3)	Moffat Co. (3)	Rio Blanco Co. (3)	Routt Co.
504	150	272	236	256

Hospital Occupancy Rate (4)

U.S. (2)	Colo. (3)	Moffat Co. (3)	Rio Blanco Co. (3)	Routt Co.
76%	63%	63%	34%	67%

Death Rate (per 1,000 population) 1978

U.S. (2)	Colo. (3)	Moffat Co. (3)	Rio Blanco Co. (3)	Routt Co.
8.8%	6.9%	8.0%	8.1%	4.6%

(1) All estimates except U.S., based upon returns of volunteer questionnaires by practicing physicians: Probably very unreliable.
(2) Source: Barbara Schmalz, BLM State Office, Denver
(3) Source: Department of Health Information, Colorado Department of Public Health (phone conversation with Peggy Carroll)
(4) Meeker = 34 percent; Rangely = 13 percent; County = 21 percent. Meeker rate is used since it is the only part of the county involved in the study area.

The BLM EIS team is, of course, on a very stringent time schedule (as are all efforts of this sort if they are to be useful), but we believe the analysis fully meets NEPA requirements.

ISSUE 10-17: Enclosed is a copy of the Catalog of Public Facility Needs in Carbon County, Wyoming. Please add this information. The City of Craig's staff, in their three-year plan, has identified capital needs to accommodate growth not shown in the DEIS.

RAISED BY:

Harold W. Young; City of Rawlins (Letter 16)

James E. Pankonin; Moffat County Planning Department (Letter 33)

RESPONSE: Thank you. We appreciate the additional data. The Fiscal Impacts portion of Section 4 has been revised to incorporate the items required to meet the minimum needs imposed by population growth (the basis of this analysis).

ISSUE 10-18: A lack of understanding of boomtowns is demonstrated on page 204 of the DEIS, second paragraph, where it somewhat confusedly states: "The communities on the other hand, would come out ahead since their costs needed for capital investments would be reduced by more than their bonding capacities." This statement comes in light of other references to revenue gaps and deficits for public facilities. It ignores the tax lead time problem, the fact that the property tax is highly inelastic, and that the projected dependence on mobile homes will have a severely detrimental effect on assessed valuation.

RAISED BY:

Robert G. Demos; Colorado West Area, Council of Governments (Letter 46)

RESPONSE: The statement quoted is intended strictly as a comparison of the No Action situation with the other alternatives, not as an absolute statement of conditions. Presumably, it could have been phrased, "The communities would not come out so far behind," which is, of course, the meaning intended.

ISSUE 10-19: Pages 270, 271, and 272 of the DEIS, Per Capita Projections of Operating Revenues and Bonding Capacities, appear to be total bonding capacity, not per capita bonding capacity.

RAISED BY:

Cindy Ogburn; Wyoming Department of Economic Planning and Development (Letter 43)

RESPONSE: The figures are total bonding capacity. "Per capita" refers to the fact that they were derived as a function of population growth since lack of data precluded other projection methods. This is described under FISCAL IMPACTS in the ECONOMICS portion of SOCIOECONOMIC ENVIRONMENT in Section 4, and in Appendix A.

ISSUE 10-20: Based on the "Acres Disturbed" tables in Section 2, the commentor states: "The lack of data on secondary land use impacts is evidenced in the non existence of data on housing and infrastructure impacts. Can any reader make reasonable judgments or decisions in such a data vacuum?"

RAISED BY:

Sarah Branson; Sierra Club, Rocky Mountain Chapter (Letter 19)

RESPONSE: Housing, infrastructure needs, secondary population projections and impacts are discussed by community in the socio economic and land use portions of Sections 3 and 4. See, for example, Figure 3-4 and related text discussion, and Table 4-38 and related text discussion, not in the acres disturbed tables in Section 2. Detail of the analysis was not published because of its sheer size; however, the detail is available in supporting files at the Craig District Office.

SUBJECT: VALUES

ISSUE 10-21: Traditionally conservative agricultural communities depend on women to work in the fields and keep books. Further, women don't compete on the same level with men they help. There is no contempt for women as janitors or secretaries. Thus, there are no negative attitudes toward women and their work. The reason there is depression and nothing to do is that today's people are not as innovative as they use (sic) to be. Clubs, discussion groups, scouts, covered dish suppers would bring people closer together and help reduce mental and physical stress.

RAISED BY:

Bill Perry, Rancher (Letter 31)

RESPONSE: The women most specifically affected by energy development are not the established farm women, but those (especially newcomers) in the affected communities. Studies have persistently shown negative impacts similar to those we have described which are associated at least partially with confronting a traditionally male-dominated value system.

Suggestions for alleviation through such activities as this commentor suggests are found in Section 4 UNCOMMITTED MITIGATION - SOCIAL. However, for newcomer women these problems are due at least in part to the fact that such processes are blocked by stereotypic rejection by and situational isolation from the community. Oldtimer women also may be caught in role and value conflicts which increase stress and have nothing to do with personal creativity.

SUBJECT: SOCIAL AND ECONOMIC MITIGATION

ISSUE 10-22: Social-structural and socioeconomic problems associated with new coal leasing are identified as unacceptably serious. Mitigations were suggested, but as "uncommitted." While the merits of mine development scheduling and local planning are emphasized, no mention of BLM responsibilities is made. It is poor public policy for the leasing agency, which is in a strategic and powerful position to support mitigating measures, not to buffer unavoidable effects. In particular, what is the protracted impact on housing, medical services and schools? The list of Federal aid programs is not evaluated on vital dimensions. Including mitigation requirements in lease stipulations and requiring energy company compliance with local permits and ordinances would be a solution.

RAISED BY:

Philip H. Schmuck; Colorado Division of Planning (Letter 13)

Steve Colby; Colorado Department of Local Affairs (Letter 14)

Frank S. Lisella; Department of Health and Human Services (Letter 27)

Duane L. Rehborg; Rio Blanco County Development Department (Letter 47)

Robert G. Demos; Colorado West Area, Council of Governments (Letter 46)

RESPONSE: See the definitions for "committed" and "uncommitted" mitigation in the GUIDE TO THE EIS at the beginning of Volume I.

BLM has limited legal power regarding stipulations in leases pertaining to financial contributions or other provisions for local impact mitigation, though energy companies are certainly urged to provide assistance voluntarily. It should be noted that the state receives back 50 percent of lease royalties and other mineral-related Federal income for the purpose of social and/or economic impact mitigation, and has the responsibility for making such distributions. There is at present a state law in Colorado limiting the amount to two hundred thousand per county per year from these funds. Application information is available from the state.

Compliance with all local permits and ordinances is expected of energy companies and is enforceable by local law officials; it does not therefore require inclusion in leasing agreements.

Revisions in the UNCOMMITTED MITIGATIONS: SOCIAL part of Section 4 include suggestions for (a) regulations which would slow mining development (and thus slow the population growth rate), and (b) actions communities and/or organizations might take voluntarily to ease the impacts upon individuals and upon community social institutions.

The long-term impacts upon housing, medical emergency facilities, and schools, cannot be estimated precisely. We can assume that housing will continue to be a problem until growth levels off and the building industry has an opportunity to catch up. The housing market will probably decline somewhat after that, without diversification of industry.

Most of the hospitals have a sufficiently low occupancy rate that, given proper planning, these facilities will be able to keep pace with growth, but it is likely that the population/doctor ratio will worsen as rural practice continues to be defined as undesirable by doctors.

Predictions of impacts upon schools are much more problematic, but we estimate that student cynicism and discipline problems will remain high, curricula will become more cosmopolitan in the larger communities, drop-out rates will rise somewhat as construction and mining wages continue to look attractive and unemployment rates remain low, and teacher turnover will remain high for the entire period under consideration.

It is noted in the paragraph explaining the list of potential financial assistance sources in "uncommitted mitigations" that the degree to which the programs listed could help overcome the projected deficits is not predictable because of frequent changes in program funding. Provision of Federal aid funds is determined primarily by Congress, and the consequent changeability renders these programs less useful. The statement clearly indicates that the list is included solely for information, and is not claimed to be a cure-all; these programs will not adequately resolve financial impact problems.

SUBJECT: DECISION-MAKING IMPORTANCE OF SOCIAL IMPACTS

ISSUE 10-23: It is not clear to what extent the selection of future leasing levels is based on the socioeconomic assessment in the EIS. The Federal Coal Leasing EIS identified socioeconomic variables as being an area that would receive very close scrutiny in the Regional EIS efforts, in determining leasing levels. The present EIS succinctly characterizes the numerous social and economic problems. Have any of these impact considerations been or will they be translated into "acceptable levels of new leasing?"

RAISED BY:

Roger L. Williams, Environmental Protection Agency (Letter 54)

RESPONSE: There are no "committed" mitigations (see definitions in THE GUIDE TO THE EIS at the beginning of Volume I) for social-structural, social-psychological, or socioeconomic aspects of new coal leasing. However, a strong suggestion is made under UNCOMMITTED MITIGATIONS-SOCIAL in Section 4, for slowing down and spacing new coal development in order to help avoid some of

the worst negative social impacts. The impacts noted in text will be considered, along with all other impacts, in the decision-making process regarding new coal leasing.

ISSUE 10-24: The suggestion is made that power plants' exemption from property taxes be removed. In Wyoming, there are no exemptions to be removed.

RAISED BY:

Cindy Ogburn; Wyoming Department of Economic Planning and Development (Letter 43)

RESPONSE: This suggestion applies to municipally-owned power plants in Colorado.

ISSUE 10-25: Federal and state aid is available to supplement local financing. However, only FmHA "601" is specifically for energy-impacted areas. Other monies could be used but that would eliminate or lessen considerably the funds available for unimpacted towns in Wyoming. We suggest the authors review and revise data and develop practicable solutions and conclusions to the sociological, economic and psychological sections.

RAISED BY:

Cindy Ogburn; Wyoming Department of Economic Planning and Development (Letter 43)

RESPONSE: The EIS is not intended as (or legally permitted to be) a plan or guide for action by communities, but primarily is an information source to assist BLM decision-makers in considering the various alternative Federal actions they have asked to have analyzed. It is secondarily assumed that all interested and/or affected individuals, groups, and communities will find the analytic data sound and useful for both evaluating Federal decisions and planning for the possible changes discussed. The sections on UNCOMMITTED MITIGATIONS-ECONOMIC AND SOCIAL, for instance, present suggestions that might be helpful to persons, groups, or communities concerned about problems raised by the EIS analysis. See definitions for "committed" and "uncommitted" in the GUIDE TO THE EIS at the beginning of Volume I.

Funding for many of the programs mentioned is admittedly inadequate, and the difficulty that communities face in obtaining these funds is pointed out in Section 3. However, funding of these programs is determined solely by Congress, and BLM can only point up the needs through documents such as this. It would seem that measures to alter the location and timing of these projects and to provide more explicit scheduling of developments, which are at the discretion of the Secretary of the Interior, offer better means to alleviate impacts than after-the-fact dependence on uncertain sources of aid.

ISSUE 10-26: Solving local financing problems through State legislation by requiring counties and municipalities to share an *ad valorem* tax is not practicable. This is a political solution which would be difficult to achieve by start-up time. Counties are not willing to share their revenues with towns.

RAISED BY:

Cindy Ogburn; Wyoming Department of Economic Planning and Development (Letter 43)

RESPONSE: Gilmore, J. S., and others, *Socioeconomic Impact Mitigation Mechanisms in Six States - Categories, Generalizations, and Unresolved Issues* (referenced in the bibliography) offers additional suggestions for handling jurisdictional mismatches on p. 35. This is a difficult political problem, but the plain fact remains that local financial resources will accrue primarily to the counties and that, without them, communities will be forced to seek aid from higher levels of government.

ISSUE 10-27: There should be mitigation measures which would help agriculture to survive as a viable industry within the region. Mitigation which would assure a reliable source of labor to the agricultural sector is particularly needed.

RAISED BY:

Jim Rubingh; Colorado Department of Agriculture (Letter 15)

RESPONSE: Revisions are included in UNCOMMITTED MITIGATION stating the contributions that land use controls and anti-inflation measures could make to alleviating agricultural problems.

The agricultural labor problem is impossible to resolve in the EIS because the basic economics of coal development are adverse to agriculture. Given the increasingly marginal economics of local agriculture, additional labor could only be provided by means of a subsidy. Because this area

attracts little migrant labor, due to the scarcity and irregularity of farm jobs, it seems doubtful that something like a reinstituted Bracero program would help very much.

ISSUE 10-28: This statement does not address any information on the present or future plans for the development of comprehensive and coordinated human service programs. We feel these concerns need to be considered in the final development plan of this project.

RAISED BY:

Jesse J. McCorry; Department of Health, Education and Welfare (Letter 52)

RESPONSE: Commentor's suggestion is an excellent one, and while such development cannot, of course, be undertaken by BLM or made a part of any lease agreement, BLM strongly supports this approach. Some attempts are being made along this line through area Councils on Government, etc., though much more needs doing. Also, see revised UNCOMMITTED MITIGATIONS-SOCIAL AND ECONOMIC in Section 4, and definitions for "committed" and "uncommitted" mitigations in the GUIDE TO THE EIS at the beginning of Volume 1.

ISSUE 10-29 One solution to social and economic impacts is the development of an RMP. This would go a long way toward reducing the uncertainty that is now hindering local planning efforts.

RAISED BY:

Robert G. Demos; Colorado West Area, Council of Governments (Letter 46)

RESPONSE: RMP's (Resources Management Plans) are a new BLM planning process, producing essentially an in-house document designed to guide multiple land use planning for BLM lands and relate this to local area opinions, values, and needs. Local communities and/or persons are encouraged to provide pertinent information, opinions, etc., and to use RMP's in every desirable way; and they should be helpful in local planning. At the present time several RMP's are getting underway in BLM area offices in the study region, and should in some cases be completed before 1985. It is doubtful that (because of their limited and special purposes) they will greatly relieve uncertainties of the types referred to by commentor.

ISSUE 10-30 Concerns were raised by Rawlins City Council letter of November 5, 1979. Some type of task force should be developed to incorporate the plans and financial capabilities of industry with the planning and administrative capabilities and needs of units of government. Lead times appear to be adequate *if* provisions are set forth now to handle the impacts and demands. The primary problem is the timing of the proposed developments. Unfortunately, a crystal ball is not available. This further complicates efforts to put together the financial package necessary to alleviate the impacts. Added to this is the difficulty in trying to distribute the expected population resulting from increased levels of energy development.

RAISED BY

Warren G. White; Wyoming Executive Department (Letter 41)

RESPONSE: The concerns raised by letter from the Rawlins City Council of November 5, 1979 were addressed in the DEIS. A task force initiated by local government with industry growth in impacted communities is a good suggestion. Unfortunately, the timing issues still exist, and BLM/DOI does not have the authority or capability to engage in the needed planning and other liaison described between energy industries and local/state governments; the state and local planning groups must pursue these goals.

Note revisions in EIS text in both population estimates and predicted impacts upon Wyoming communities; also see suggestions in Section 4 (UNCOMMITTED MITIGATIONS-ECONOMIC AND SOCIAL) and definitions for "committed" and "uncommitted" in the GUIDE TO THE EIS at the beginning of Volume I.

ISSUE 10-31 It is indeed an excellent idea to attract various other types of industry. However, what industries would be enticed to locate in Dixon or Wamsutter or Baggs or Elk Mountain? Distribution and marketing of products from these areas would be difficult. It seems doubtful that ranches would sell prime grazing land so that alternative industries could construct facilities.

RAISED BY:

Cindy Ogburn; Wyoming Department of Economic Planning and Development (Letter 43)

RESPONSE: While not all communities will be able to attract new industries, the establishment of new plants in many parts of the west--including some in small communities--shows that it is by no means an impossibility. Another factor is the good transportation available to much of the Wyoming impacted area, which would assist marketing. A good deal of ranch land has already been converted to nonagricultural uses, at least in Colorado, and more probably will be, given the economic problems of the livestock industry.

Multiple-industry development may not be feasible or appropriate for every community, but it is an alleviative measure which should be open to consideration by all.

11

TRANSPORTATION

SUBJECT: RAIL TRANSPORTATION

ISSUE 11-1: The DEIS did not discuss the proposed rail link between UP and the D&RGW between Creston Junction and Craig.

RAISED BY:

John Weiner; Sierra Club/Friends of the Earth (Letter 5)

James E. Pankonin; Moffat County Planning Department (Letter 33)

RESPONSE: The DEIS did not address the aforementioned link because there is little probability that it would occur in the forseeable future. It must be pointed out that this proposed rail line had the preliminary engineering done for it by the early 1920s and has been discussed ever since.

Two reasons explain the improbability of the project. First, a large capital outlay by D&RGW would be needed to complete the line (in the area of $100,000,000). Second, if the line was to be built, it would reduce the total number of ton-miles hauled over the D&RGW tracks which would result in a decrease in revenues to the D&RGW.

ISSUE 11-2: The cost of grade separation or additional crossing signals should not fall on local or state governments.

RAISED BY:

Bill Perry; Routt County Planning Commission (Letter 31)

Roger Williams; Environmental Protection Agency (Letter 54)

RESPONSE: Currently, money for grade crossing upgrades can be obtained from various sources including the Department of Transportation, State of Colorado, local governments, and the railroads. Normally, the cost of a project is split between two or more of these entities. BLM recognizes that these funding sources have limited capabilities to fund grade separations. Last year, Colorado BLM paid to the state, $22,000,000 for payments-in-lieu-of-taxes to help mitigate impacts from development caused by BLM actions. The Colorado legislature has the authority to use these funds as it wishes to help mitigate impacts. It must be noted that BLM is a land management agency not a regulatory agency, and has no authority to require railroads to pay for grade crossing upgrades.

ISSUE 11-3: The DEIS does not address the problem that the region is having shipping goods. It also does not address the problems coal companies are having with rail transportation such as high rates and having to build their own rail spurs.

RAISED BY:

James E. Pankonin; Moffat County Planning Department (Letter 33)

RESPONSE: The EIS indicates that the major constraint on rail traffic, in the short run, is and will be obtaining power equipment and rolling stock. The rates that coal companies pay are beyond the scope of the EIS. The fact that coal companies must pay for their own spur lines is addressed as an irretrievable commitment of funds.

ISSUE 11-4: The impacts from the construction of railroad spurs are nowhere addressed, nor is the likelihood of increased development (particularly mineral) along the new rail lines considered, or its possible impacts analyzed.

RAISED BY:

Brad Klafehn (Letter 37)

Robert J. Golten; National Wildlife Federation (Letter 48)

RESPONSE: The impacts from construction of railroad spurs were considered in the EIS from the standpoint of adding additional acres disturbed from offsite facilities. Tables 2-5 through 2-15 show the estimated miles of rail spurs required for each tract, and the estimated acres disturbed from these spurs is built into the acres disturbed tables, under offsite facilities. These areas of disturbance were used in the impact analysis for each applicable resource.

The specific location of these spurs is not known at the present time and would be determined by the successful bidder when a mine plan is submitted. The estimated mileage and acres disturbed were developed during tract delineation for the purpose of general impact analysis. Specific impacts from these spurs would be addressed when required rights-of-way applications are filed by the lessee and environmental analysis completed. The likelihood of increased mineral development along these spurs is not known and would be difficult to predict. All proposed and existing developments in the area are listed in Tables 2-2 and 2-3 and were considered in the impact analyses. No other proposed developments are known at this time.

ISSUE 11-5: The assumption that extensions and upgrading of rail lines to move coal to market is not realistic given the problems railroads seem to be having in maintaining existing stock and trackage.

RAISED BY:

Sarah Branson; Sierra Club (Letter 19)

RESPONSE: Proposed development plans for the tracts were prepared by USGS and took into account economics and technological constraints. The construction of rail spurs which would tie into existing rail lines was determined to be the most feasible method of transportation. Rail line capacities and other transportation impacts are discussed in the transportation section.

SUBJECT: HIGHWAY TRANSPORTATION

ISSUE 11-6: Traffic characteristics could be better understood by using the terms volume, operating speeds, congestion, and hindrances rather than capacity.

RAISED BY:

William P. King; Wyoming Highway Department (Letter 45)

RESPONSE: The terms "congestion" and "hindrances" are not easily definable in terms of impact projection for transportation. The method of using volume to capacity ratios better defines and quantifies the term "congestion." Congestion is predictable only when traffic volumes exceed the design capacity of a road. Obviously, congestion would also occur when accidents or bad weather occur, but the times of these events are not predictable.

ISSUE 11-7: At-grade crossings do exist with state highways along the UP mainline; however, they are not in Carbon or Sweetwater Counties.

RAISED BY:

William P. King; Wyoming Highway Department (Letter 45)

RESPONSE: See text changes.

ISSUE 11-8: Grade separations are not justified on a hazard rating basis. The hazard rating is used to prioritize grade separation needs.

RAISED BY:

Willam King; Wyoming Highway Department (Letter 45)

RESPONSE: Hazard ratings were not used to determine what crossings should be grade separated, but were used to describe the increased potential for loss of life and/or property as a result of the new leasing. The exposure factors, using Department of Transportation thresholds, were used to determine which crossings *should* be grade separated.

ISSUE 11-9: Service Level B should be used in computing the capacity figure rather than Service Level C.

RAISED BY:

Willam King; Wyoming Highway Department (Letter 45)

RESPONSE: Service Level C was used in the capacity figure because it is the service level closest to, but not exceeding, the national speed limit. Most highways in the U.S. are designed for Service Levels B or A, but because of the 55 mph speed limit, none of them approach their design level. Thus the use of Service Level C.

ISSUE 11-10: No mention is made of the proposed link between the UP and the Chicago Northwestern Railroads in the DEIS.

RAISED BY:

Willam King; Wyoming Highway Department (Letter 45)

RESPONSE: The proposed link was not mentioned because it is beyond the scope of the EIS. However, it should be fully discussed in the upcoming Powder River Coal EIS.

SUBJECT: ALTERNATE METHODS OF TRANSPORTATION

ISSUE 11-11: Mass transit is not discussed in the DEIS.

RAISED BY:

Bill Perry; Routt County Planning Commission (Letter 31)

RESPONSE: Mass transit is mentioned in the EIS as an uncommitted mitigation measure.

ISSUE 11-12: Coal slurry lines were not addressed as an alternative coal transport method in the DEIS.

RAISED BY:

Bill Perry; Routt County Planning Commission (Letter 31)

RESPONSE: Technically, slurry lines could be used to transport coal. However, in light of the state's stand on the exportation of water, slurry lines were not considered to be a viable alternative and were not addressed in the EIS.

12

LAND USE

SUBJECT: LOCAL AUTHORITY

ISSUE 12-1: The draft summary may be in conflict with the court decision of Ventura County vs. Gulf Oil Company in assuming that affected jurisdictions have sufficient authority to impose effective land

use controls and policies. The draft also does not specifically address whether or not permit approval from local governments will be a part of the leasing program.

RAISED BY:

James E. Pankonin; Moffat County Planning Department (Letter 33)

RESPONSE: The Supplement to the Northwest Colorado Coal EIS discusses the total jurisdiction of the state and local governments over nonpublic or privately-owned lands. Since all tracts (both in Colorado and Wyoming) include at least some private or state lands, local government retains zoning and permit authority over those lands. Under "Required Authorizations" in Chapter 1 of the Supplement, the conditional use permit authority of the counties is discussed, especially as it relates to the operation of coal mines.

ISSUE 12-2: The draft EIS points out the need for land use planning and zoning at the local level. A summary of existing comprehensive plans and their adequacy for dealing with the anticipated growth which would result from this proposed action should be included within this analysis. With this information the level of planning assistance which will be required by local governments could be more readily identified.

RAISED BY:

Jim Rubingh; Colorado Department of Agriculture (Letter 15)

RESPONSE: The DEIS refers the reader to the Southcentral Wyoming Coal EIS and the Supplement to the Northwestern Colorado Coal EIS for a discussion of the authorities, responsibilities, and institutional relationships between all levels of government in land use planning. This EIS is intended to provide information to the decision makers to assist them in determining where and what coal will be mined in the region. A secondary benefit of the EIS is to provide local planners and officials with data to incorporate into their facilities needs projections and to help them anticipate future growth within their jurisdictions. It is not the role of the EIS to dictate planning needs or to assess how well or how poorly each jurisdiction is addressing problems of growth management.

SUBJECT: COMMUNITY EXPANSION

ISSUE 12-3: In the analysis of different communities, nowhere is any mention made of Maybell and effects which may occur there. Maybell, although unincorporated, does exist as a residential area and should be included in any impact analysis in terms of its ability or inability to accommodate certain projected levels of growth.

RAISED BY:

Robert G. Demos; Colorado West Area Council of Governments (Letter 46)

James E. Pankonin; Moffat County Planning Department (Letter 33)

RESPONSE: There has been a long-standing moratorium on building permits in Maybell because of a high ground water table and the lack of a sewer system. When the DEIS was prepared, the Colorado Department of Local Affairs had taken the position that they would not fund a sewer system in accordance with the state's Human Settlement Policies. However, as the DEIS went to press, the Department of Local Affairs reversed their previous decision and issued a Certificate of Need to the county in the amount of $265,680 for a sewer treatment and collection system for the town of Maybell. Engineering studies are now under way and when the system is completed, it is anticipated that the moratorium will be lifted and Maybell will be available to accept some growth. Depending on the capacity of that system, Maybell will accept some of the population that would otherwise be going to Craig, especially in those alternatives that include the Lay Tract (maximum and high) which is in close proximity to Maybell. Although there are county roads that would provide access to the Danforth Hills Tracts from Maybell, due to the present quality of those roads, it is anticipated that Maybell will attract few, if any, employees of those mines. Maybell will act as a release valve for population pressures in Craig, but until the capacity and completion date of their sewer system is known, the magnitude of the growth Maybell would accept is only speculation.

ISSUE 12-4: The DEIS states that urban expansion should be directed toward less desirable lands rather than permitted to expand onto agricultural lands; however, Craig is surrounded by agricultural lands.

RAISED BY:

James E. Pankonin; Moffat County Planning Department (Letter 33)

RESPONSE: In fact, the DEIS recommends no encroachment on prime or important agricultural lands. It is recognized that most communities in the region are surrounded by various types of agricultural lands and that urban expansion will inevitably occur on these lands. It is the responsibility of local officials to determine which of those agricultural lands would be most appropriate for community expansion, while preserving those lands that are most important to the agricultural community in the region.

ISSUE 12-5: Under uncommitted mitigation for land use it was recommended that urban expansion occur on less desirable land adjacent to existing urban areas. The commentor points out that the only existing urban areas in the Wyoming portion of the region are Rawlins and Rock Springs, and that populations allocated to communities such as Wamsutter and Dixon are distant from these cities.

RAISED BY:

Cindy Ogburn; Wyoming Department of Economic Planning and Development (Letter 43)

RESPONSE: "Urban expansion" in the context of this statement is synonymous with community expansion and refers to any additional development of rural lands for urban uses such as residential development, roadway construction, schools, parks, and commercial and industrial facilities. This development will occur both in the small communities such as Dixon and Wamsutter, as well as in the larger urban areas of Rawlins and Rock Springs.

SUBJECT: CONVERSION OF AGRICULTURAL LANDS TO MINING

ISSUE 12-6: The impact of the transition from agriculture to further mining operations will be increased significantly rather than "very little" as expressed in the draft summary (p. 4).

RAISED BY:

James E. Pankonin; Moffat County Planning Department (Letter 33)

RESPONSE: The text has been changed to clarify this in the final summary.

ISSUE 12-7: The DEIS fails to address the issues and concerns of the private landowners in the checkerboard landownership pattern in Wyoming, and the impact of Federal leasing on their operations, both economically and otherwise.

RAISED BY:

John A. MacPherson; MacPherson, Golden & Brown, Attorneys (Letter 23)

RESPONSE: The Land Use analysis in Section 4 contains a discussion of the economic and grazing losses to ranchers in the region that would result from the leasing. It is also stated that this loss could be mitigated by financial compensation. Throughout the land use planning process, tract delineation and ranking, and EIS scoping, an attempt was made to raise specific concerns of local landowners and others with an interest in the proposed leasing. Every effort was made in the EIS to address those issues and concerns that were raised and that were germane to the EIS.

ISSUE 12-8: The draft concludes that the tracts will become lost to livestock after the lease is let.

RAISED BY:

Wayne E. Sowards; Utah International, Inc. (Letter 38)

RESPONSE: The loss of lease tracts to livestock use in 1985, is a worst case assumption. It was determined that once a lease is let, the existing land use on Federal land, such as grazing by livestock, will be lost for a higher use for the life of the lease. The area might still be utilized by livestock but not with Federal grazing fees or supervision. Also, the exact areas that will be lost are impossible to determine until the mine plan stage.

SUBJECT: UNCOMMITTED MITIGATION

ISSUE 12-9: The DEIS recommends that "Energy impact funds, severence taxes and technical assistance should be funnelled by the state to the impacted communities in an amount proportionate with the impacts felt by those communities from increased urbanization." The commentor suggests that this would be unfair to other communities in the state that are not impacted since they would not receive a part of these funds.

RAISED BY:

Cindy Ogburn; Wyoming Department of Economic Planning and Development (Letter 43)

RESPONSE: This comment amplifies the very problem that the recommended solution addresses. Both Wyoming and Colorado have not been returning in full the funds derived from local energy mineral extraction to the communities that are impacted by that mining. It is imperative for the successful mitigation of impacts from localized mining activity, for the states to return a maximum of the available funds and assistance derived from that mining to the local jurisdictions being impacted, and not to other unimpacted municipalities.

ISSUE 12-10: While the merits of mine development scheduling and local program planning are emphasized, no mention is made of BLM responsibilities in this regard.

RAISED BY:

Steve Colby; Colorado Department of Local Affairs (Letter 14)

RESPONSE: The discussion of sequential mine development scheduling has been expanded in the Indirect Land Use Impacts analysis of Section 4, including general BLM authority relating to lease sale scheduling under uncommitted mitigation.

SUBJECT: DATA ACCURACY/ADEQUACY

ISSUE 12-11: The summary matrix does not include land use impact data and this information should be easy to obtain.

RAISED BY:

Sarah Branson; Sierra Club, Rocky Mountain Chapter (Letter 19)

RESPONSE: The land use impact data has been obtained and is included in the Section 4 discussion of land use impact. Due to the wide variety of data and the fact that it is described tract by tract and community by community, it is imposible to fit into the summary matrix, and has therefore been omitted.

ISSUE 12-12: The draft EIS states that 7.1 acres per AUM was used to calculate lost AUM. Does this figure mean allow for the croplands in the study areas and forage requirements of elk, deer, and antelope?

RAISED BY:

Wayne E. Sowards; Utah International, Inc. (Letter 38)

RESPONSE: The 7.1 acres per AUM figure was obtained from the Craig and Rawlins Districts' grazing files.. It does not include croplands and forage for wildlife.

13

CLIMATE AND AIR QUALITY

ISSUE 13-1: Fox Park is not representative of climate in the mining areas.

RAISED BY:

David Moody; Wyoming Game and Fish (Public Hearing Minutes 50)

RESPONSE: The witness was correct in his statement that Fox Park is not truly representative of the Wyoming tracts. A text change will insert Rawlins data for the Fox Park data.

ISSUE 13-2: Back TSP levels stated for Hanna Basin are low.

RAISED BY:

David Moody; Wyoming Game and Fish (Public Hearing Minutes 50)

RESPONSE: The witness stated that the figure used in the DEIS (of 29 $\mu g/m^3$) was low and should be replaced by 48 $\mu g/m^3$ based on his discussions with Wyoming DEQ. The data used to determine the 29 $\mu g/m^3$ background for the Hanna Basin came from the Curry Ranch, Seminoe II and Lucky Mc monitoring sites. These data are on file with the Air Quality Division, DEQ in Cheyenne. In a phone conversation with Robert Schick of DEQ on July 22, 1980, the figure 48 $\mu g/m^3$ is a proper background level for the town of Hanna itself, not the whole basin. Mr. Schick indicated that 29 $\mu g/m^3$ was the proper background for the Hanna Basin.

ISSUE 13-3: Total suspended particulates (TSP) is a poor air quality measurement.

RAISED BY:

Bradford R. Bean; National Oceanic and Atmospheric Administration (Letter 51)

RESPONSE: The commentor is correct that the mass determinations of TSP do not reflect the true air quality for a region. Size distribution and particle chemical makeup are also very necessary. For the DEIS, only particulate mass measurements were available and thus used as a measure, albeit poor, of the air quality of the region.

ISSUE 13-4: The effect of particle size distribution and chemical composition on visibility and cloud microphysics should be considered.

RAISED BY:

Bradford R. Bean; National Oceanic and Atmospheric Administration (Letter 51)

RESPONSE: Due to lack of the necessary data concerning particle size distribution and chemical composition, these elements were not included in the analysis presented in the EIS.

ISSUE 13-5: It would be incorrect and imprudent to reach a decision that Craig is in violation of air quality criteria on the basis of a single hi-vol sampler located adjacent to and downwind from the main street of Craig.

RAISED BY:

Wayne E. Sowards; Utah International, Inc. (Letter 38)

RESPONSE: The EIS has been changed to reflect the fact that Craig presently exceeds the TSP standards (as stated in the text) but is not in violation of the standards.

The wind rose for Craig indicates predominantly westerly and southwesterly winds. A study of the 1976 and 1977 TSP measurements in Craig did not indicate Victory Way as a predominant source of particulate matter. The study is on file in the BLM Craig District Office. It was performed by Mitchell Baer, making use of least-square-feet regression analysis.

The Colorado Air Quality Division and EPA have realized the problems associated with the use of the Craig TSP data and have designated Craig an "unclassified" TSP region.

ISSUE 13-6: I do not agree that climatological effects are negligible, especially considering end-use of the production and the climatological unknowns of increasing NO_2, CO_2 and SO_2 concentrations.

RAISED BY:

Craig Thompson (Letter 53)

RESPONSE: The potential effect of increased emissions of CO_2, NO_2 and SO_2 is not fully understood. Based on the inconclusive state of the research work in this area, it was determined that no definitive long-term effect to the climate (temperature, precipitation and winds) could be identified in the EIS.

ISSUE 13-7: Does the TSP modeling described on these pages consider deposition? This is an important component in describing expected TSP levels that is frequently omitted in air quality monitoring. The draft EIS states that a set of worst case meteorological conditions was used in evaluating expected TSP levels and concludes that the Trapper and Wisehill Mines will generate TSP levels in excess of standards within several kilometers of the mines. This is in disagreement with air quality modeling done for Trapper Mine in 1979 by Environmental Research and Technology, Inc.

RAISED BY:

Wayne E. Sowards; Utah International, Inc. (Letter 38)

RESPONSE: A deposition term was included in the present study. There appears to be several differences in the methodology of the two studies which could account for some of the difference. The ERT study included two mines, the present study (performed by Radian) analyzed three mines in that area. The ERT study placed total production at 2.5 MTPY, Radian used a figure of 5.76 MTPY. The ERT study used emission factors from the Colorado Air Pollution Control Division, Radian used EPA Region VIII office factors. The truck speed in the ERT study was 15 mph, Radian used 35 mph as a truck speed.

ISSUE 13-8: Will the combined impact of Federal oil shale leasing, power plants, synfuel plants and coal completely overwhelm air quality standards?

RAISED BY:

Sandra Holliman; Engineer (Letter 7)

RESPONSE: The No Action Alternative presents a cumulative analysis of impacts to air quality from all anticipated development in the study area. This analysis does not include oil shale or synfuel development inasmuch as no specific actions are currently planned. Should such energy projects be formally proposed then an appropriate EIS would be prepared to assess their impacts. This EIS shows that the combined effects of new Federal coal leasing and all other probable private and Federal actions likely to occur within the time frames addressed would not cause impacts to air quality which would violate Federal or state standards.

ISSUE 13-9: The Colorado Air Pollution Control Commission made the decision that background particulates from agricultural activities would not be counted against a community for the purpose of ATTAINMENT of NON-ATTAINMENT of total suspended particulates in air quality measurements. Based on this fact the commission does not agree with statements found in Part I, DRAFT EIS COAL, page 304, Table 4-63 Air Quality Matrix, Colorado Air Quality, TSP.

RAISED BY:

Craig Weaver (Letter 8)

RESPONSE: The commentor is correct, the standards will not be violated. The standards at these two locations will *exceed* rather than violate TSP air quality standards for both Colorado and Federal law. Text changes will be made to reflect this distinction.

ISSUE 13-10: The conclusions of the present air quality study differ from those of the 1979 PEDCo study.

RAISED BY:

Craig Weaver (Letter 8)

RESPONSE: The PEDCo study (PEDCo, 1979) concluded that if the trend confirmed by their models continued, the level of TSP measured in Craig would be below the standards in 1982. The analysis performed for the DEIS concluded that Craig would continue to exceed the TSP standards through 1995. The social and economic scenario used in the PEDCo study differed significantly from that

used for the present analysis. The analysis for the DEIS projected a much higher level of social growth and energy development in the Craig area. This difference could account for the significantly different conclusions of the two studies.

ISSUE 13-11: No mention of the effect on the air quality related values in Class I air quality areas was found.

The Mt. Zirkel and Flattops Widlerness areas are downwind of proposed coal mines in the Yampa Valley. Emissions from existing power plants and those under construction may be approaching the limit for air quality degradation over these Class I areas.

The final statement should specifically show anticipated air quality impacts on all wilderness areas.

RAISED BY:

Craig W. Rupp; USDA, Forest Service (Letter 18)

RESPONSE: The commentor questioned the impact of the coal leasing on the Flattops and Mt. Zirkel Wilderness areas. Based on the modeling analysis the impact will be small, less than 5 $\mu g/m^3$ TSP on an annual basis. It is felt that other air quality related values in these wilderness areas will not be affected by the proposed development.

ISSUE 13-12: This impact statement is in error when it states that Steamboat Springs has a growing season of 28 days when in reality it is more like 60 days.

RAISED BY:

Bill Perry; Rancher (Letter 31)

RESPONSE: Though no mention of the growing season for Steamboat Springs is made in the DEIS, the figure of 28 days is given for Steamboat Springs in the technical report on climate and air quality for the analysis. This figure refers to the mean number of days between the last *occurrence* in the spring of 32 degrees F recorded at the Steamboat Springs climate co-op station and the first *occurrence* in the fall of 32 degrees F at that station. Growing season length is not always defined in this manner. Some definitions use an *average daily temperature* of 40 degrees F for the necessary temperature threshold. If this latter threshold is used in the above definition then Mr. Perry's figure of 60 days is correct for Steamboat Springs.

ISSUE 13-13: When and where did a hurricane strike this area?

RAISED BY:

Bill Perry; Rancher (Letter 31)

RESPONSE: The reference to hurricanes has been deleted.

ISSUE 13-14: Different figures for TSP concentration in the Craig area were submitted.

RAISED BY:

Craig Weaver (Letter 32)

RESPONSE: The submitted data was analyzed. However, based on the representativeness of the seven monitoring sites, it was determined that Site 7 best represented the natural TSP background level in the Craig area. The figure 22 $\mu g/m^3$ was thus used as the TSP background level in the EIS.

ISSUE 13-15: The use of precipitation data as if it meant something is absurd. The fact is that precipitation is relevant to reclamation, if not most other features of environment, only insofar as it results in moisture being made available to plants. There is no way to judge from the DEIS how much of the precipitation is snow, which sublimates and contributes nothing to the soil moisture, and how much is thundershower, which runs off and contributes nothing to soil moisture. There is no way to judge how much of the precipitation could be caught and held by snow fences and other catchment techniques and made available to plants.

RAISED BY

John Wiener; Sierra Club Friends of the Earth (Letter 5)

RESPONSE: The exact amount of precipitation that is available for plant growth in the EIS region has not been calculated. It would vary from location to location and be dependent on temperature, winds, relative humidity, soil type and cover, precipitation as snow, precipitation as thunderstorm activity and many other variables.

Table 3-41 presents precipitation-as-snow data in the EIS region. Snow can be expected to fall in the EIS region from November to April, except in the higher elevations where snow may fall in all months except July. Coupled with Table 3-40, an estimate of non snow precipitation can be made. A large percentage of non snow precipitation comes from thunderstorms.

The following equation approximates the amount of water which can be held behind a snow fence (Tabler, 1975):

$$Q = 5000\,P\,(1-.14^{\cdot 001r})$$

P = relocated precipitation

r = fetch or contributing distance of snow fence.

The exact amount of water which could be caught and held by snow fences on the 16 tracts depends, as stated in the comment, on the reclamation-related data for all tracts.

ISSUE 13-16: While possible interaction of TSP emissions from proposed tracts with those of other proposed tracts and other proposed and existing development is noted in the tract profiles, there is no evidence that a serious attempt was made to model air quality from the various interactions which are either inevitable or foreseeable. Such data is not included for any of the tracts.

RAISED BY:

John Wiener; Sierra Club Friends of the Earth (Letter 5)

RESPONSE: As part of the site specific analysis for the DEIS, existing and future known development in the area of proposed tracts was modeled and the interactions delineated in the site specific analysis reports on file at the Craig District Office.

ISSUE 13-17: The TSP predictions appear to be somewhat lower than those made in the Southcentral Wyoming ES.

RAISED BY:

John Wiener; Sierra Club/Friends of the Earth (Letter 5)

RESPONSE: The commentor noted slightly lower air quality impacts predicted by the present analysis and the SC Wyoming EIS analysis. This is due to slightly lower production figures used in the present analysis.

ISSUE 13-18: The Cherokee Mine is upwind from Rawlins. It is also upwind from Red Rim and China Butte some of the time (most of the time for Red Rim), and the rail spur for the Cherokee operation would go between the Cherokee and the Red Rim Tracts. How would this interaction affect the Red Rim Tract? How would it affect the City of Rawlins?

RAISED BY:

John Wiener; Sierra Club Friends of the Earth (Letter 5)

RESPONSE: There should be a small (less than 10 $\mu g/m^3$) interaction between the Cherokee Mine and the Red Rim Tract and the Cherokee Mine and the City of Rawlins. This information is not available in the FEIS due to the updating necessary for the isopleth mappings for Wyoming from the DEIS.

ISSUE 13-19: As for Hanna, the "high level of development" scenario for the Hanna area happens to be essentially what is now proposed under all alternatives except for No Action. Maps R8-7 and R8-8 in the Southcentral ES are thus presumably accurate for the Hanna area. They show, among other things, TSP up to 60 $\mu g/m^3$ adjacent to the Seminoe Reservoir. Will that happen?

RAISED BY:

John Wiener; Sierra Club/Friends of the Earth (Letter 5)

RESPONSE: The present analysis work indicates the TSP levels near the Seminoe Reservoir will not exceed 40 $\mu g/m^3$ (annual geometric mean), including background.

ISSUE 13-20: Just exactly how many violations of Wyoming, Colorado, and Federal ambient air quality standards will result from the proposed action? Where will they be?

RAISED BY:

John Wiener; Sierra Club/Friends of the Earth (Letter 5)

RESPONSE: Based on the analyses for the DEIS, there will be no violations of the NAAQS, CAAQS, or WAAQS.

14

NOISE

ISSUE 14-1: The DEIS does not address noise impacts outside of the region, and does not specifically address public buildings (i.e., schools) located near rail lines. No mention is made of increased noise in communities where at-grade crossings exist. Also, the baseline noise levels were based upon population densities.

RAISED BY:

Sarah Branson; Sierra Club (Letter 19)

Bill Perry; Routt County Planning Commission (Letter 31)

Roger L. Williams; Environmental Protection Agency (Letter 54)

RESPONSE: The DEIS addressed the impacts of increased noise in Section 4, Noise, paragraph 4. Analysis of noise impacts on specific communities outside of the region was limited because no coal train routes were identified. The routes were not identified because no markets for the coal have been identified. Therefore, it is impossible to predict which communities outside of the region would be affected and what the degree of the effect would be. The Oak Creek School was not specifically identified in the DEIS as being impacted by noise because, given the scope of the EIS, it would be impractical to list each receptor that would be impacted by the increased noise. However, the DEIS indicated that increased levels would occur in areas adjacent to the rail line. I0215

OTHER ISSUES

SUBJECT: ENERGY ANALYSIS

ISSUE 15-1: A discrepancy exists between the Federal Coal Management Program Final Environmental Impact Statement and a recent study, "Energy Future," on the potential for energy conservation.

RAISED BY:

Office of Energy Conservation, State of Colorado (Letter 12)

RESPONSE: This issue is beyond the scope of this EIS.

ISSUE 15-2: The DEIS does not address energy requirements and conservation potentials as required by the CEQ guidelines (43 CFR 1502.16e). A net energy analysis does not appear in the text.

RAISED BY:

Office of Energy Conservation, State of Colorado (Letter 12)

RESPONSE: See text change.

ISSUE 15-3: The vast majority of the coal to be produced will be used for coal-fired power plants. Since these plants have a thermal efficiency of about 35 percent, this should be factored into the net energy analysis.

RAISED BY:

Office of Energy Conservation, State of Colorado (Letter 12)

RESPONSE: Thermal efficiency of conversion was not considered because it was assumed that conversion efficiency would affect all calculations equally.

ISSUE 15-4: Increased traffic will increase the fuel consumption by private vehicles as a direct or indirect result of the new leasing. The increased fuel consumption should be discussed in the EIS as more than "Uncommitted Mitigation."

RAISED BY:

Office of Energy Conservation, State of Colorado (Letter 12)

RESPONSE: The net energy level analysis includes projected fuel requirements for these direct and indirect trips. The energy used by these trips is less than one percent of the total energy requirements needed to extract and transport the coal. Therefore, ridesharing and van pooling would have only limited value in conserving energy for the project.

ISSUE 15-5: Lease holders should be required to use the most energy efficient methods for coal transportation, employee transportation, and mine operation.

RAISED BY:

Office of Energy Conservation, State of Colorado (Letter 12)

RESPONSE: The mode of coal transportation was assumed to be unit trains, which is the most energy efficient way to transport coal. The DEIS addresses employee ridesharing under Uncommitted Mitigation. Energy efficient equipment for mine operation was not addressed in the draft because we have no engineering plans developed for any of the proposed mines. This subject is better addressed in the mine plan EA or EIS.

ISSUE 15-6: As a result of the proposal, will additional generating capacity and/or new transmission lines be required? If not, what are the sources for the power?

RAISED BY:

Office of Energy Conservation; State of Colorado (Letter 12)

RESPONSE: During the last two years, electrical load predictions have been significantly higher than the actual demand. Based on past patterns, sources of power for coal mining should be available.

1

United States Department of the Interior
OFFICE OF SURFACE MINING
Reclamation and Enforcement
WASHINGTON, D.C. 20240

MAY 2 1980

Memorandum

To: Assistant to the Director for Coal Management
Bureau of Land Management

From: Assistant Director, Technical Services and Research

Subject: OSM Review of the Green River-Hams Fork Draft EIS

A member of my staff has reviewed the draft EIS and found that the document is well organized and does a good job of covering the major issues and impacts that might occur due to leasing of coal in the region. This office notes that the policies enumerated in the document that pertain to OSM's responsibilities for mine plan approval are correctly identified and referenced.

2

STATE OF COLORADO
1876

COLORADO DEPARTMENT OF HEALTH

Richard D. Lamm
Governor

Frank A. Traylor, M.D.
Executive Director

May 19, 1980

MAY 22 1980

E.I.S. Team Leader
Bureau of Land Management
Craig District Office
P. O. Box 248
455 Emerson Street
Craig, Colorado 81625

RE: Green River - Hams Fork Regional Coal DEIS

Gentlemen:

The subject document has been reviewed and addresses to some degree, points of interest to this Division. The individual site evaluations presented in Vol. II appeared to have some inconsistencies. The salinity impact on the Colorado River is presented both as a percentage increase and a tons/year increase. It would seem that the two figures should be proportional for all facilities, but are not. The most obvious example is Dan forth Hill #2 and Williams Fork Mountains sites where salinity increases are projected as 0.0028% and 90 Tons/year and 0.0051% and 400 Tons/year. To a lesser degree, several other projections are also inconsistent. It is requested that these apparent inconsistancies be corrected plus Tons/year figures be presented for all locations such as Empire, Bell Rock, Hayden Gulch and Lay. Another point of inconsistency is on Grassy Creek where salinity impact is projected as 100-130 Tons/year and 155 Tons/year. Correction of associated tables will also be necessary, if the above results in a change.

The Division has been concerned about the cumulative impact of energy activity on the Colorado River Basin, but in the past has not seen projections as are presented in Vol. I page 182. One clarification which should be made is that projected salinity increases shown in this report are on the 1046 mg/l figure and not the adopted standard at the Imperial Dam of 879 mg/l.

The statements on page 182-183 of Vol. I are somewhat in error. Steamboat Springs and Craig are both expanding treatment capacity to handle the projected 1995 and 2000 populations, respectively. The adequacy of the population projects may ultimately be in error but the designs are to meet unionized ammonia limits for the Q7-10 of the Yampa River at these points. Therefore, the statement that impacts on aquatic biology would be disastrous with or without the development of new Federal coal is in error. In fact, energy development in this area is probably the single largest cause of increased load to the systems,

4210 EAST 11TH AVENUE DENVER,COLORADO 80220 PHONE (303) 320-8333

As is stated in the report, the States of the Colorado River Basin were required by federal law to develope and implement a salinity control program. The federal leasing program, as is evidenced in the DEIS, will make compliance with the adopted standard virtually impossible. This is stated as much of the salinity impact is long term and resulting from sources which this Division cannot address through the NPDES program or any other program. The sources in part refer to leaching of spoils after reclamation and subsequent surface water recharge. These facts are mentioned as two federal programs appear to be in conflict, with the states presently being in a position to do little about either program as salinity in the Colorado River Basin continues to increase.

Sincerely yours,

Robert J. Shukle, P.E.
Industrial Waste Consultant
General Services Section
WATER QUALITY CONTROL DIVISION

RJS/ddb

cc: Gary Broetzman
Marcia Hughes

3

Advisory Council On Historic Preservation

This response does not constitute Council comment under Section 102(2)(C) of the National Environmental Policy Act or Section 106 of the National Historic Preservation Act or Executive Order 11593.

1522 K Street, NW
Washington, DC 20005

Reply to:

Lake Plaza South, Suite 616
44 Union Boulevard
Lakewood, CO 80228

May 1S, 1980

MAY 27 1980

DISTRICT OFFICE

'80 MAY 19 A7

Mr. Charles W. Luscher
U.S. Department of the Interior
Bureau of Land Management
Colorado State Office
Rm 700, Colorado State Bank Building
1600 Broadway
Denver, Colorado 80202

Dear Mr. Luscher:

The Council has reviewed your draft environmental impact statement (DES) for Green River - Hams Fork Regional Coal leasing in Colorado and Wyoming, circulated for comment pursuant to Section 102(2)(C) of the National Environmental Policy Act. We note that the undertaking will affect the Union Pacific Mammorth site and numerous other cultural properties included in or eligible for inclusion in the National Register of Historic Places. Circulation of a DES, however, does not fulfill your agency's responsibilities under Section 106 of the National Historic Preservation Act of 1966 (16 U.S.C. Sec. 470f, as amended, 90 Stat. 1320).

Prior to the approval of the expenditure of any Federal funds or prior to the granting of any lease, license, permit, or other approval for an undertaking, Federal agencies must afford the Council an opportunity to comment of the effect of the undertaking on properties included in or eligible for inclusion in the National Register in accordance with the Council's regulations, "Protection of Historic and Cultural Properties" (36 CFR Part 800). Until these requirements are met, the Council considers the DES incomplete in its treatment of historical, archeological, architectural, and cultural resources. You should obtain the Council's substantive comments through the process outlined in 36 CFR Part 800.9. These comments should then be incorporated into any

subsequent documents prepared to meet requirements under the National Environmental Policy Act. Brit Allan Storey may be contacted at (303) 234-4946 for further assistance.

Sincerely,

B.A. Storey

Acting Louis S. Wall
Chief, Western Division of
Project Review

4

Rawlins, Wyo.
June 13, 1980

Mr. Fred Wolf
District Manager
Bureau of Land Management
Rawlins, Wyo.

Dear Mr Wolf:
In reference to your 1600 of June 9th. I will be out of State at the time your meetings are scheduled, I hope that this letter can be entered into the hearings.

First I would like to congratulate the Bureau and its personnel for well written Environmental Impact Statement of Green River - Hame Fork Regional Coal.

My first comment is on Red Rim s tract consisting of 20,480 acres west-south west of Rawlins, Wyo. Socio-economic impasts are here now affecting every community in Carbon County and these impacts showing up in loss of habitat and wildlife too. Red Rim will employ 241 people to mine about 50 million tons of recoverable coal. I have nothing against mining, but am concerned in the methods used.
My concern about Red Rim is the fact that our winds are predominantly from the south-westthis will have deplorable effect on health of people living in Rawlins,Sinclair and maybe other towns down wind, besides increase use of water to combat the dust and dirt blown into and on to homes, cars, lawn and other areas where dust settles.
Strip mining will also have adverse effects on all wildlife in the area, erosion will occur and reseeding will prove negative.

My next comment is on China Butte tract consisting of 16,320 acres adjacent to on south of Red Rim.
This tract has 118,408,000 tons of recoverable coal and will provide employment for for about 240 people.
I doubt that blowing dust from strip mining will be felt in Rawlins, but Socio-economic impacts will be felt. There will be adverse effects on Wildlife and soil because of lack of water and the disturbed surface will probably not take well to seeding.

I hope Historical sits will be set aside, but am sure that Archaeology will be by-passed in the China Butte Tract.

Most Wyoming residents feel that Federal leases for mining coal in Wyoming should be let in an orderly manner, depending on need end capability of existing mines. This could enable miners to move from a worked out tract to a new one.
There is also a feeling that coal mined in Wyoming should be burned out of Wyoming and this feeling will probably intensefy as more coal burning plants are developed.

Sincerely,

R. Lee Trejo
1028-8th. St.
Rawlins, Wyo 82301

CC: Mr. Dan Martin B.L.M. Craig, Colo
Rawlins Rockhounds Pres.
Karl Karstoft Rawlins

5

JOHN D. WIENER
ATTORNEY AT LAW
PHONE 307-743-0317
260 NORTH FOURTH
LARAMIE, WYOMING 82070

Mr. Dan Martin
EIS Team Leader
Bureau of Land Management
Craig District Office
P.O. Box 248
Craig, Colorado 81625

June 14, 1980

Dear Mr. Martin;

The enclosed comments on the Green River- Ham's Fork regional coal leasing EIS are submitted on behalf of the Friends of the Earth and the Sierra Club, as well as myself as a citizen who is or may be adversely affected.

As a citizen, I wish to add my regret that you and your staff have been involved with the production of this document in the way that has been described in the enclosed material.

The comments of the Sierra Club, Friends of the Earth, and John Wiener consist of three main parts; first, material written specifically on the Green River process and its part in the larger perspective afforded by review of the whole federal coal management process; second, the submission of material which has previously been provided to the regional coal team, but which has not been responded to, and which was written specifically in response to early phases of the current program and the development of the DES, and which is therefore properly included as comments on the DES; and third, incorporated by refefence, the Frienda of the Earth comments on the Federal Coal Management Program DES. As these last-mentioned comments have been printed in the FCMP FES, there is no need for them to be reprinted in the FES on the Green River- Ham's Fork proposed leasing.

Sincerely,

John Wiener

John Wiener, for himself,
Sierra Club, and
Friends of the Earth

INACCURACIES IN THE GR-HF DEIS RENDER IT INADEQUATE

Because of gross inaccuracies in the "trended environment", which is the equivalent of the No Action alternative, the socioeconomic portions of the DEIS are useless. Because of an astonishing lack of data about the tracts themselves, the environmental impacts are not adequately described.

A. WYOMING BASELINE

While it is difficult to evaluate the full extent of potential and actual problems with the Wyoming baseline data, several rather amazing errors render the analysis suspect. In terms of the socioeconomic analysis as it relates to towns, the citizens of Medicine Bow may well be dismayed that their municipality was either omitted entirely, or simply subsumed within Carbon County.

More amazingly still, however, BLM may have injured the sensitivities of the 243 employees who produced 2.4 million tons of coal last year at the Rosebud Mine. Incidentally, the Rosebud mine produced 2.8 million tons in 1977, according to the BLM. (See 1979 Annual Report of the State Inspector of Mines [Wyoming], p. 36; South-central Wyoming Coal ES, p. R1-5, as corrected by errata section in FES volume.)

As previously pointed out to the GR-HF RCT, the DOI's production estimates are subject to severe question. (See Friends of the Earth comments on GR-HF RLT, appended and made part of these comments.) Despite the previous submission of comments on the production projections, there are still difficulties with such items as whether mines actually exist (e.g., Rosebud), and whether mines will be in production.

As a starting point, let us assume that BLM will agree that there will be a market for Hanna Basin coal, since BLM proposes to lease three tracts, in all of the alternatives, in the Hanna area. Wyoming Geological Survey Report of Investigations No. 17, (see the previous comments, supra), lists various mines and makes certain predictions about the future mining in the Hanna area. Mr. Gary Glass, the coal specialist and director of the coal department of Wyo. G.S. was apparently never consulted about whether or not he thought his publication had any substance or value. However, in a recent interview (June 4, 1980), Mr. Glass was consulted about his publications' divergence from the BLM's views. Mr. Glass did not report that he had been previously inaccurate about the design capacities of mines in Hanna, which total 22 MMTY or so, which is considerably larger than the BLM's projection.

Mr. Glass was reluctant to opine on tha basis of BLM's views, but was kind enough to review his estimates and make a rough projection for 1987. Not only is the design capacity for tha Hanna Area estimated to be well over 20 million tons per year in 1985, but it is astimated by Mr. Glass to continua to be ovar 20 million tons per year for 1987. It must be emphasized that Mr. Glass works for tha citizens of Wyoming, as a stata amployee, and is tha foremost axpert in his field, and therefore was not in good conscienca able to fail to discuss thesa mattars with citizens. Tha remarks of Mr. Glass as reportad hare ara not official estimatas; however, Mr. Glass's publishad work has not been retracted or correctad. Why did tha BLM fail to consult this man? Why did the State representative fail to consult tha state gaologist in charga of tha coal saction of tha state geological survay? Is thera any reason to believa that tha Wyoming basaline is at all credibla?

To make this perfactly claar, it is to be spelled out: If there is a market for Hanna Basin coal, mines which are already mining at less than their capacity will axpand their production to fill that market. BLM asserts that there will be a market, and therefore BLM proposes to leasa coal. WHY did tha BLM ignore the fact that more coal can be producad from tha Hanna coal fiald without any further federal leasing than is projectad to be produced for the entire Wyoming portion of the Green River-Ham's Fork study region? What is tha rationale behind BLM's choica of a baselina figure (18.9 million tons per year) which is lower than tha capacity of mines already operating, or well underway to becoming operational? Is this commenter sadly in error, or is the BLM in arror? Is there some confusion which has escaped tha non-professional aye, and that of Mr. Glass? Please explain.

Pending such explanation as is requested above, it appears to be the case that the Wyoming baseline is not accurate. Not only are tha projections of production open to quastion, but tha omission of an operating two-and-ona-half million ton per year mine make the whole subject suspect. It is simply not credibla. (Also, what is BLM's view of the development of the §24 Pit, and tha Corral Canyon minas, North Knobs, Atlantic Rim, and Continental Divida? (As shown on the Wyoming Geological Survey's map of mines and minerals, 1979).)(It is noted that BLM refuses to consider the possible development of Kemmerer Coal Co.'s Savery PRLAs.)

It is ironic to recall the words of Mr. Dan Martin, EIS team laader in charge of this document, when Mr. Klafehn pointed the abova error out to tha RCT; "thare is no question but this will have to be a hundred percent re-written".

At this point it is necessary to re-emphasize a very important point, and that is the fact that neithar Mr. Martin nor anyona else involved in the production of the DEIS)or any othar phase of the process below the political appointea level, with tha possibla exception of the Solicitor's Offica) has had tha time necessary to do a professional and competant job. This has producad not only possibly the worst environmental impact statement written in years by tha BLM, but also a tremendous wasta of crucially important staff time and expertisa for the sola purposa of furthering the alaction goals on the incumbent president's staff. In the words of Mr. Jack Horton, former assistant sacretary of tha DOI, "Why don't we call the whola thing off until after tha alection?" (Powder River Regional Coal Team Meeting, the Hitching Post, Chayenne, April 14, 1980,)

As Mr. Klafahn has datailad, tha "data inconsistency" in the baselina for Colorado has important ramifications for tha regional laasing targat; to wit, correcting solaly for the "inconsistency" in Colorado, and pretending that tha Wyoming basaline is accurate (see above), the regional leasing targat would be, if tha NW Supp. is correct, 211.5 MMT, by tha latest method of calculation ravaaled.

The and result of this "data inconsistancy", as it is referred to in the DEIS, is that tha Colorado baseline is absolutely usaless, because of overestimation of coal impacts by 185% or so, or the Colorado basaline is accurate and the need for leasing anywhere near tha prefarrad altarnative's 754 million tons does not axist. Thare is no point in going on with this particular segment of the discussion, as Brad Klafehn exposad this incredibla arror on December 13, 1979, to no avail, apparently. This alona makes the DEIS uttarly uselass.

C. BECAUSE OF BASELINE INACCURACIES, THE DEIS IS INADEQUATE

Tha functional result of tha "data inconsistencies" may be graphically illustrated by a small affort. Consider tha tables which form tha basis of Section Four of tha DEIS. Thare are 63 tables. Becausa of inaccuracies in tha projaction of tha amount of mining, (if tha 14.8 figura is correct, instaad of tha 27.4 figure - saa pravious paga), and bearing in mind that tha Wyoming basalina appears to be inaccurata as wall as that for Colorado, probably 16 of 63 tables ara not necessarily inaccurate.

B. COLORADO BASELINE

Minor difficulties with the baseline abound, such as the fact that BLM apparently considers Maybelle to be a suburb of Craig, or just part of the County, or something else. But as is revealad quite early in the DES, the biggest problem is the staggeringly bizarre use of a basaline figure of 27.4 million tons per year, in 1987. Actually, this is not revealed; what is said is that the "inconsistency" in the basaline is that it is approximately 19 million tons per year higher than current estimatas. The 27.4 MMTY figure is revealed in Table 2-2.

Mr. Brad Klafehn has succinctly described the absurdity of this wierd decision, and the following synopsis is his work.

Tha 27.4 MMTY figure comes from the Northwest Colorado Coal Supplemental Environmental Report; which supplemented tha Northwest Colorado Coal Regional ES of 1976. It is a mid-range projaction for 1985, which assumes production from (1) development of coal which needs no federal action such as leasing, (2) approval of mina permits of new and existing minas, (3) development of a small amount of non-federal coal as a result of the development of federal coal, (4) tha granting of short-term federal leases naeded to maintain production, and (5) replacement of the axpirad short-term leases when necessary to maintain production, and (6) the approval of mine plan modifications as necessary to allow mining of the short-term leases. (See NWCC Supp., pp. 1-13 and 1-14.)

It is not inaccurata to state, therefore, that with tha addition to existing leases of fairly minor amounts of coal, it was the BLM's contention in 1978 that 27.4 million tons per year would be produced from the Colorado portion of the GR-HF regiona alone. Specifically, why is this not considered to be the case now?

As the Federal Register notica on the regional leasing target shows, however, Colorado is allocated a production goal of 16 MMTY by BLM for the year 1987. But the October 5 1979 notice also statas that Colorado production in 1987 is expected to be only 14.8 million tons per year. What happened to tha 13.2 MMTY of disappearing production?

More importantly in this contaxt, I must add from Mr. Klafehn's work tha question about baselines. If the BLM now projects that No Action, or baseline production from Colorado would be 14.8 million tons per year, why is there used a baseline which assumes almost twice as much production?

If the NW Supplement is correct, then there is no need for leasing on anywhere near the scale proposed, if at all, as Mr. Klafehn pointed out to the RCT months ago. If the current figure of 14.8 is correct, then the BLM has overestimated future growth by overestimating the impacts of coal under the no leasing scenarion by roughly 185 percent.

The condition of the socioeconomic environment is grossly misrepresented by the DES. The environmental impacts of the mining which will occur are grossly misrepresented, and tha environmental impacts of baseline population growth are grossly misrepresented. The only alternative is that the need for lessing, purely aside from the questions raised before these comments, and in tha first 29 pages of these comments, is grossly misrepresented. Either way, the impact statement gives no meaningful or useful data, and is therefore inadequate. Tha only question regarding the adequacy of the DEIS is whether it is sufficiently inadequate that a new draft must be issued, rather than merely a final with some corrections. It is amusing to note that DOI ran up against this problem some time ago; it had issued a draft EIS and then made real changes in the material and issued a final EIS. DOI's view that it had complied with NEPA was held to be incorrect, in Natural Resources Defense Council et al. v Hughes.

THE DEIS AS A STUDY OF THE REGION IS INADEQUATE

DOI seems to have adoptad the attitude that it can write an impact statement about coal leasing in an area, and includa in its description of the environment othar coal leasing in the area, and basically ignora everything else which is ocurring or about to occur in tha region, including tha results of other federal action and even federal action by DOI. This makes for a poor quality of statement. (As for legal adequacy, see 40 CFR 1508.7, among other sections.)

Among the major developments in the region which have been ignored ara the possible development of federal as well as state and privata coal, should tha market be as strong as BLM statas that it will be (in formulation of tha regional leasing target). Such coal includes the development of existing federal laases, for reasons which are discussed at length above, and development of the 26 PRLAs in tha region.

It may seem as though the DEIS's main analysis might sarve as a "high case" analysis, and thus have some value. This is to a certain extent true. But no impact assessment based on some amount of coal production will be accurate unless the location of the coal production has some validity. In this casa, it may ba that the NW Colorado Supp. was not utterly wrong in its projection of the location of mining, and that the basalina projections presentad for Colorado could be used, if it seems that potantial production would in fact come from tha mines listad in tha NW Supp. Table II-2. But added to that would have to be the results of ths present laasing.

In any event, as far as scenarios of future regional coal production are concerned, production from the PRLAs should be included, as this is "reasonably foreseeable", to use the term of the Council on Environmental Quality.

For the first, time oil shale activity is reasonably foreseeeble (at least to the extent of large amounts of subsidias), and the lack of inclusion in this DES of the effects of oil shale activity is notabla. It is stated on p. 9 of the DES that oil shale was included in the baseline data, but whether or not it actually was is not clear. The author of that page appears to be from DC, and there may hava been some confusion. Also, The Wall Street Journal, Tuesday June 3, 1980, reports on page 13, thet the Supreme Court has effirmed the judgments of lower courts that DOI must grant finality to cleims for es much as 5 million acres of oil shale lands in Colorado, Wyoming, and Utah, for $2.50 per acre. It is possible thet the Craig district and the Colorado State Office were not advised of this disgusting possibility. Now, they ere, and since the Supreme Court has spoken, this must be considered a foreseeable event. Increased oil shale leasing has also been proposed at various times, and again recently, end the combination of the claims and the leasing could be ebout enough to induce a revival of secessionism.

Also ignored are proposed gasification operations. Among the welter of rumors, the GR-HF RCT was advisad eerly in its deliberetions by the Rocky Mountein Energy Company of the possible development of coal gesification oparations on the Cherokee tract, which is directly west of Red Rim. Thus, it is reasonably foreseeable that such an event may occur, even if other proposels not reported directly and publicly to the regional coal team ere discounted.

The effects on the region of power plant construction at Craig and Moon Lake are ignored; Craig Unit 4 is never mentioned, and Moon Lake is brushed aside with the explanation that a different environmental impact stetement is being written. If Moon Lake is far enough along in the process thet an EIS is being written by BLM, then is it not "reasonably foreseeeble"?

At this particular moment, nucleer power plents ara not proceeding at a great pace. But, not only are there roughly 66 nucleer power plants alreedy in existence, there ere building permits or limited work authorizations for 89 more nucleer plants (Newsweek, May 26, 1980, p. 76; U.S. News and World Report, Nov. 12, 1979, p. 34, reporting that not only are 66 plants in operation, but that 106 more are "on the way".) It is therefore reasonably foreseeable that mining in the uranium mining districts at Ketchum Buttes and Baggs could or will occur.

Given the figures on rail capacity remaining in tha Denver & Rio Grande Western Railroad it is reasonably foreseeable that the region will be affected by the construction of a rail lina between Craig and Rawlins, or Craig north past tha Lay tract and the othar mines in that vicinity and on through the Little Snake Valley, past tha proposad uranium mill in Baggs (which would be promoted by tha railroad) and then north either past Ketchum Butte's uranium strip mina or just north between the Red Rim-China Butta mines and the Cherokee mine, to Creston Junction.

This was suggested to the BLM during the EMARS years, by the Wyoming Geological Survey, and pretending that it is not possible (or probable) serves no useful purpose.

In short, e greet deal of activity other than more coal boom development is "reasonably foreseeable" in the region, and the ebove discussion does not include the effacts of oil and gas exploration, which will continue, and uranium activity in the Red Desert region of Wyoming, such as that elreedy under wey, or the possible results of e company putting two and two togethar end realizing that Wesatch coal contains a fairly high amount of uranium (See USGS Professionel papers 1099-B end 427) end deciding thet uraniferous coal would be a good source for gesificetion if tha uranium can be recovered as a by-product (which Rocky Mountain Energy Co. has epperently figured out). While grossly overestimating the development of coel for baseline purposes, the development of everything else has been grossly undereetimated. It is ironic that BLM could conceivably be somewhere close to the truth about some places, such es Craig and Rawlins, for the wrong reasons, but nevertheless, the impact estimations for the towns cannot be assumed to be worhtwhile, since even if by chance the gross increment of populetion figures were close, the distribution of impects would almost certainly be incorrect. This is especially important for wildlife end other environmental impacts, which are almost certainly nowhere near to those estimated. The DES may be close in its estimates of the effect of mining in critical winter renge if nothing else nearby is happening, but that includes the incorrect presumption thet no other development will happen to be on criticel winter range, end thus completely misses the boet on cumuletive impact, which is the real purpose of the study in the first plece.

OMISSIONS MAKE THE DES INADEQUATE AS A STUDY OF THE EFFECTS OF THE PROPOSED FEDERAL ACTION

The DES concedes the point that boom development such as is forecast for the region, and such as has already occurred in most of the region, has a number of repulsive side effects, such as increased alcoholism, drug use, divorce, suicide, mental illness, juvénile delinquency and so forth. It should be noted that the DES is not forthcoming on the fact that increeses in these symptoms of what is celled "social psychological" breakdown are fer out of proportion to the increases in population. (See, a.g., Little, R.L., "Energy Boom Towns: Views from Within", in Native Americens and Energy Development, supra, and for very recent deta, see the statements made to the Powder River Regional Coal Team at its meeting of May 29, 1980, in Gillette, minutes of which will no doubt be forthcoming soon and which will be available from Mr. Stan McKee in the Wyoming State BLM office.)

But most vicious is the slighting reference to the fact that local inflation, or "mineflation", ceused by rapid population growth, has a devastating effect on the elderly and the others in the populetion who live on fixed incomes. There is a definite data gap on this subject, but BLM falls short of its obligations by pretending that the gap is larger than it is. For example in the Central Utah Regional Coal ES there is presented excellent deta on tha number of persons living on welfare and other "transfer payments" from the government to individuals, as wall as retirement, social security, and data on the elderly in tha affected communities. These people are important end part of the community and part of the human environment which will be significantly affected. Rectify this.

In the South-central Wyoming coal ES there is data presented in table R4-11 on the ability of consumers to pay for housing. This should have been done in the GR-HF DES.

In many impact statements, BLM has presentad a renge of data compering the health care facilities and health care personnel with national standards. This should have been done.

There is in fact an enormous range of information which could heve, and should have been presented. Agein, the public should be aware of the fact that BLM's personnel were given an absolutely inadequate period of time in which to prepare the statement, and thus these omissions might not have resulted from any lack of interest, But these comments are about the statement, not about the feilure of the staff to refuse to do an incompetent job under impossible demands.

Leaving the enormous subject of socioeconomics, a major omission in the environmentel area should be noted. As described at length in the Friends of the Earth comments on the FCMP-draft ES, reprintad in the FCMP-FES and appended to these comments, the use of precipitation deta es if it meant something is ebsurd. The fact is that precipitation is relevent to reclamation, if not most other feetures of environment, only in so far as it results in moisture being made available to plants. There is no wey to judge from tha DES how much of the precipitation is snow, which sublimates and contributes nothing to the soil moisture, end how much is thundershower, which runs off end contributes nothing to soil moistura. There is no wey to judge how much of the precipitation could be ceught and held by snow fences and other catchment techniques and made eveilable to plants. This may be partly due to the lack of reclamation-related data which charecterizes the tract profiles for ¼ of the 16 tracts, end it is no doubt partly due to the leck of time in which to do an adequete job. But such dete is readily available from the sources which provide other climatic data, at leest to some extent, and should have been included, along with e discussion of the meening of the data.

Categorization and listing of omissions of these types could be continued extensively; however, given tha glaring faults of the DES, and the depth of responses to comments submitted, there seems little velue in doing so.

AIR QUALITY MODELLING SEEMS TO BE INCONSISTENT WITH OTHER DATA

Whila possible interaction of TSP emissions from proposed trects with those of other proposed tracts and other proposed and existing development is noted in the tract profiles, thare is no evidence that e serious attempt was mada to modal air quality from the various interactions which are either inevitable or foreseeable. Such data is not included for any of the trects.

Further, tha TSP predictions appear to be somewhat lower than those made in the South-centrel Wyoming ES. For example,

> "Hanne South Mine is predicted to cause embient TSP concentretions greater then the Wyoming stenderds at the adge of the town of Hanne during the life of the mine... The annual TSP concentrations around the existing Medicine Bow Mine caused by tha mine alone ere predicted to continue to exceed tha Wyoming air quality standards during tha study period... The annual TSP concentrations in Rawlins are expected to increese without the proposed actions [Cherokee, Hanna South, and Seminoe II] from 40 $\mu g/m^3$ in 1980

to 70 µg/m^3 in 1990. The maximum 24-hour TSP concentrations ere predicted to rise from 136 µg/m^3 to 238 µg/m^3 during the period."[228 is e violation.]

South-central Wyoming Coal ES,
Pp. R4-6 end R4-13.

And so on - see maps R8-5 through R8-8, FES volume. See also cheptar R4 of the DES, as emended by tha FES, for furthar examples.

The Cherokee mine is upwind from Rawlins. (See the Southcentrel ES for wind rose.) It is eleo upwind from Red Rim and Chine Butte some of the time, (most of the time for Red Rim), and the rail spur for the Cherokee operetion would go between the Cherokee and the Red Rim trecte. How would this interaction affect the Red Rim trect? How would it effect tha City of Rawlins?

As for Hanna, the "high level of development" scenario for the Hanna aree happens to be essentially whet is now proposed under all alternatives except for no ection. Maps R8-7 and R8-8 in the South-centrel ES are thus presumably accureta for the Hanna eree. They show, among othar things, TSP up to 60 µg/m^3 adjacent to the Seminoe Reservoir. Will thet happen?

Just exactly how many violations of Wyoming, Coloredo, and Nationel ambient eir quality standerds will result from the proposed ection? Where will they be?

ESTIMATIONS OF WILDLIFE IMPACTS ARE NOT ADEQUATE

The DES presupposes (see "Need for leesing" section, section 1 of the DES, and documentation perteining to need for laesing end development of regionel leasing target) thet the market for coal from the region will be greeter than it is now. As described above, there is reason to believe thet some of the coel to meet that demand will be produced from the existing federel leeses, es well es non-federel sources, and thet some of it may come from the 26 PRLAs in tha region.

15 of the 16 proposed trects have special wildlife velues. How many of the other possible sites of development will unusual impacts, such as by destroying criticel wildlife winter range, or riparian habitat?

It is not adequate to essume thet impacts can be quantified from gross production figures. The location of the impacts is far more important than the tonnage produced. The DES does not even bother to make guesses et which existing leeses and PRLAs will be most benefitted by the rail spur development which would result from the proposed leasing if the proposed trects were mined.

On merely superficial examination, the following questions ere suggested:

(1): Should the DES assume for analysis that OSM's regulations will epply to the proposed actions?

(2): Should the DES assume that other critical winter range in the study region, which might be elternative habitat for some of the current populations, will be mined in accordance with OSM regulations?

(3): Should the DES assume OSM epplicebility for operetions for minerals other then coal, since non-coel minerale ere not currently so subject?

(4): If OSM regulations apply to eny operations, will the reguletions be in some cases inoparative, due to current litigation and the judgments of lower courts?

(5): If OSM regulations ere entirely eppliceble, will they prevent reclamation of lands which can now be cheracterized es criticel winter range" to topogrephy capable of supporting such usa?

(5A): E.g., is reclamation which includes tha creetion of draws such as thet which is described by the EMRIA No. 7 report to be crucisl fewning hebitet for pronghorn legel under OSM's reguletions?

(5B): E.g., is reclemation to ridges end slopes which support tell browse legelly possible?

(6): Even if veriances or other deviations from OSM reguletions are possible, does current knowledge and technology provide e basis on which to reesonably believe thet criticel hebitet which is cherecterized by rough topogrephy end stabilized (geomorphic quesi-equilibrium) incised draws and stream bottoms can be reesteblished?

(7): Regerdless of legelity, does technology exist for the reeetebliehment of woody draws end tell browse species, such es those listed in the DES and its regional predecessors, which may be criticel es winter forege?

(8): If the answer to question 7 is effirmative, cen such technology be required legelly?

(9): Will the epperent prohibition of leeving cliffs (e.g. former highwells) end steep slopes prevent mitigation which might be ettempted?

And so forth, ed neuseum. It eppeers at this time thet the legel paremeters of reclamation requirements ere not et this time capeble of specification, beceuse of litigetion. It also appears that if DOI preveils, the extent to which deviation will be permitted from OSM's permanent reguletory program is questionable, and may involve stete progrem devistions. Finally, it eppeers from cursory end non-professional review of the published literature thet tachnology needed may not exist.

It is possible that the DES fails to describe a major issue in wildlife impact estimation which stems from en epparent conflict with the Office of Surface Mining, Reclamation, and Enforcement regulations (30 CFR Chapter VII, March 13, 1979). If it is true that compliance with OSM reguletions would prevent reclamation of surface mined arees in such e way es to reestablish critical winter range, then ell wildlife impacts have been underestimated. This would result from the fact that if the apparent conflict exists, all losses of critical winter range would be permanent, and not temporary. If this is the case, gross estimations of the extent of local and regional decline of large mammal populations which are presented in the DES are inaccurate.

The apparent conflict stems from Sections 30 CFR 744.12, 780.16, 816.24, 816.97, 816.100-- 816.106, 816.111 - 816.117, and Part 826, inter alia. The situation is also confused by the litigation which is occurring over the legality of some of these and other potentially relevant regulations as they apply to some or possibly all places. It is clearly DOI policy to enforce its regulations if possible and if adequate funding for inspection is provided; however, at this point the epplicability of the relevant regulations may be in question.

Some of the features of the Red Rim trect are described by the EMRIA study on thet tract (EMRIA Report No. 7, 1976, DOI, (BLM, Bu. Rec., G.S.)). For instence, "The rough physical features of the countryside provide ideal year long habitat for pronghorn. The draws contain sagebrush heights desirable for fawning areas and are used extensively for this purpose." (Op. cit., p.6). One draw in particular on the study area "must be classified as a crucial antelope fawning area as well as an area which provides other basic life requirements for antelope." (Ibid.) "The browse covered ridge tops and slopes provide crucial winter habitat for the mule deer present." (Op. cit., pp. 6-7.) Also, "...the cliffs must be considered es crucial nesting habitat for raptors." (Op. Cit., p. 7.) As the remainder of the report makes clear, the values for wildlife result from the combination of topography and its effects on snow melt/sublimation, soil moisture, soil types and depths, and ultimately on vegetational characteristics.

Without similar studies of the Colorado tracts which are possibly critical winter range, it is necessary to suspect that some of the same features are relevant. These comments will not attempt exhaustive analysis of any of the issues raised by the foregoing material, partly because adequate information is not available at the time of writing, and partly because there are several unanswered questions which would need to be answered before conclusions could be reached.

CONCLUSION REGARDING GR-HF PROCESS AND DEIS

Three major conclusions stand out. First, there has been insufficient time during the entire process for any of the BLM or state personnel to do an adequate job in any phasa of the process. This conclusion is based on observation of the regional coal team's meetings, review of documents provided to the regional coal team, and review of the DEIS.

Second, the tract selection is inadequate to provide flexibility and avoidance of adverse impacts, as well es inadequataly studied. A summary of the detailed comments which could be made on Volume II of the DES is as follows: (A) 15 of the 16 tracts have some special wildlife value, renging from critical winter range to burrowing owl end/or black-footed ferret habitat; (B) None of the 16 tracts has received full application of the landa unsuitebility criteria; (C) Air quelity modelling appears to be deficient or questionable where done, end to have not been done for TSP interections between tracte, tracts and other mines, existing or proposed, and trects, mines, proposed mines, and other developments such as reil spurs; (D) Of 9 tracts for which surface owner consent is required before leasing, surface owner consultetion has bean completed for only 1 tract, and the effect of SOC on the other 8 trects has not yet been determined; (E) 3 of tha 16 tracts may be unencumbered by alluviel velley floors; determinations heva yet to be made for 13 of tha 16 tracts; (F) Important reclamation-related data is not available for 4 of the tracts, and e totel of 5 out of 16 trects are not stetad to have severe reclamation problems and/or data gaps; and (G) 10 of the 16 tracts ere not edequately studied for threetened and/or endangered species of plants, or vegetation in general, and there are indications that many of these tracts have not in fact been visited by BLM's vegetation specialists.

Third, either the leasing targat is vary badly mistaken or tha impact statement has no value es a description of the region under the no action alternative and under the various alternatives presented. The impacts of the proposed renga of elternatives ere grossly understated by virtue of the gross ovarestimation of coal production without further leasing and tha consequent vast diminution of the effects of tha proposed laasing. The attitude manifest in the entire document is that since you will lose your legs, we will hardly bothar you by taking en erm as well. The impect statement is freudulent in ite massive minimization of the effects of the proposed ections. As en eid to decision making, it is so hopelessly muddled, by the logicel contradiction embraced between tha baselines and the leasing target essumptions that its velue is very close to null. It is inadequete, end the entire process hes been inadequate.

6

THE STATE OF WYOMING

ED HERSCHLER
GOVERNOR

Wyoming Recreation Commission

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JAN L. WILSON
Director
777-7695

June 2, 1980

Dick Hartman
State Planning Coordinator
2320 Capital Avenue
Cheyenne, Wyoming 82002

RE: 80-124; Green River-Hams Fork
Park I and II

Dear Mr. Hartman:

We have reviewed the droft environmental statement for the Green River-Hams Fork Coal Region and I have enclosed comment cancerning recreatian aspects af the project.

The repart hos also been reviewed by bath the historical and archeological sections and it is our apinian that the cultural aspects have been adequately cavered at this point.

If you have any further questians, please contact John Carlsan.

Sincerely,

John F. Carlsan, Chief
Resources Divisian and
Deputy SHPO

JFC:klm
Encls.
cc: State Directar, Bureau of Land Management

WYOMING RECREATION COMMISSION

STATE HISTORIC PRESERVATION OFFICE

REVIEW AND COMPLIANCE

Interdisciplinary Staff Comments

Archeology • History • Historical Architecture • Recreation Planning

TO: John F. Carlson, Resource Division Chief

FROM: John Keck, Recreation Technician JK

DATE: Mey 22, 1980

RE: Green River-Ham's Fork Environmental Impact Statement

The stetement seeme to heve covered all espects of recreetional neede and demande that will be effected by the projected increases in mining and population for this area.

I can offer no commente other than to suggest that informetion contained in the repart be referred to in the consideretion of future mineral develapment.

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COMMENTS CONCERNING GREEN RIVER - HAMS FORK DRAFT ENVIRONMENTAL IMPACT STATEMENT

THERE ARE SEVERAL SERIOUS DISCREPANCIES CONCERNING EXISTING LEASES AND COAL DEVELOPMENT, AND THE BASELINE CASE OF GR-HF DEIS, WHICH IS ITS VERY THESIS. ITEMS OF LESSER IMPORTANCE, BUT WORTH CONSIDERING, ARE REGIONAL AND WILDLIFE IMPACTS. THE FOLLOWING COMMENTS ARE IN DESCENDING IMPORTANCE:

⇒ EXISTING LEASES AND COAL DEVELOPMENT

THE GR-HF DEIS DOES NOT CONSIDER A VERY IMPORTANT POTENTIAL THREAT THAT IS EXPLAINED FULLY IN "NORTHWEST COLORADO COAL REGIONAL ENVIRONMENTAL ASSESSMENT - SUPPLEMENT", 1978. IN 1978 ABOUT 7,000,000 TONS/YR. WERE PRODUCED IN NW COLO, WITH A PROJECTED 1980 LEVEL = 20 M TONS/YR, WHICH WAS BLM'S MID-LEVEL CHOICE. EXISTING OLD LEASES WOULD HAVE TO PAY 17¢/TON SHIPPED. CURRENT PRICE ≈ $8/TON. NEW LEASES WOULD HAVE TO PAY A ROYALTY = 12½% PER TON. NATURALLY, OLD LEASES NOT YET DEVELOPED, WOULD BE PREFERENTIALLY, BEFORE ANY NEW ONES. THIS IMPACT IS A THREAT, NOT RECOGNIZED BY THE GR-HF DEIS. IT SHOULD BE ADDRESSED.

⇒ PREFERENCE RIGHT LEASE APPLICATIONS

THE DEPT. of INTERIOR, HAVING THE RIGHT TO GRANT THESE LEASES (DILIGENCE DATE = 1991). SHOULD SUBMIT THIS FACTOR IN THE DEIS.

⇒ BASELINE CASE

CONVERSATION WITH AN EXECUTIVE COMMITTEE MEMBER IN DENVER SIERRA CLUB REVEALED THAT REAL IMPACT WOULD BE A CASE OF 33,000,000 TONS/YR. THE GR-HF DEIS CITES 27.4 MILLION TONS/YR. AS THE BASELINE WITH ADDED 13 M T/YR, BECAUSE OF NEW LEASES. THIS WOULD MEAN A 65% ↑ IN IMPACT; BLM SEES "MERELY" A 48% ↑.

REGIONAL PROBLEMS

WILL THE COMBINED IMPACT OF FED'L OIL SHALE LEASING, POWER PLANTS, SYNFUEL PLANTS AND COAL COMPLETELY OVERWHELM AIR AND WATER QUALITY STANDARDS?

WILDLIFE PROBLEMS

IT IS COMMON KNOWLEDGE THAT THE AREA AROUND CRAIG IS POPULATED BY MIGRATORY DEER AND ELK THAT USE THE AREA FOR CRITICAL WINTER RANGE. BLM'S ASSERTION THAT THEY CAN "WORK AROUND" THE NEW LEASES TO PRESERVE ADEQUATE HABITAT IS QUESTIONABLE, HOW??

AND WHAT IF OLD LEASES AND PRLA'S ARE ADDED? THE COLO. DEPT. OF WILDLIFE HAS SOME SERIOUS RESERVATIONS ABOUT THE EFFECTS OF THE GR-HF LEASING ALTERNATIVE.

Sandra Hellman
Engineer
Aurora, Colorado

Good Evening:

My name is Craig Weaver and I live near Hayden. I am representing mysalf as a concerned citizen of the area at this hearing. The araa of concarn I wish to discuss is the Total Suspended Particulate (TSP) statements referrad to in Part I of tha Green River-Hams Fork, Draft Environmental Impact Statement Coal. My expertise in Air Quality has been as a member for thrae years, of the Colorado Air Pollution Control Commission, 1976-1979. I was a member of tha Commission whan Craig was initially declared a NONATTAINMENT AREA for particulates and when the Commission changed the designation to UNCLASSIFIED due to sampling techniques and the fact U.S. Highway 40 was being reconstructed adjacent to the sampling site.

In a recent discussion with Mr. Wayne May, Colorado Air Quality Control Division, the 1979 sampling data from the High Volume Sampler atop the Courthouse amounted to 41 observations. The sampling did not start until after Juna 14, 1979 and only 82% of the data was valid, producing an annual geometric means of 93 micrograms/cubic meter. This rasult is not surprising, based on the time of year when tha sampling was done.

Based on the recent history of Craig, June is the beginning of the high construction activity, tourist trade is on the upswing and agricultural activity is in full swing. The climata is also changing to hot, dry and windy with little or no precipitation until lata in the fall.

All of these conditions will distort the sampling technique. To reach a fair conclusion, one must analyza the total conditions rasponsibla for the high concentration of TSP at the sampling unit:

1. Sampling unit calibration and frequency thereof.
2. Sampling tachniques and care taken in handling of the samplea.
3. Sampling frequency during the year on a regular every 4th day basis.
4. Traffic conditions at thia time dictate that all of the concrate trucks going to the Yampa Project Unit #3 must pass the sampling station to the job site. This creates a potentential for an incalculable amount of vehicle transported particulate.

5. Add to this the increase of vehicla milas traveled to tha major shopping areas, fast-food rastaurants and auto dealerships locatad on tha west side of Craig along U.S. Highway 40 that alao pass the aampling station.
6. From the PEDCo 1979 raport, raferrad to on page 102 of Part I of tha DRAFT ENVIRONMENTAL IMPACT STATEMENT COAL, paga 27: "background contributions of particulate of 20 micrograms/cubic meter are tha LOWEST concentrations racordad at a sita of Utah International known as P5." This could hardly be claasified as rapresentative of tha overall araa. Tha highest concantrations in 1978 of all tha sites operatad by Utah International, was 54.6, page 8, PEDCo report.
7. Tha VISIBUME variable is applied as a variabla based on straat conditions within 200 feat of tha sampling sita, page 27, PEDCo. Based on only thraa streets within this givan perimetar, the streets must have bean loadad with particulate matter.

Now lat us look at tha positive side. Craig, at this point in time, is using two streat sweepers and a straat washing truck on a regular basis to reduca particulate mattar on tha streats. To reduca tha haavy truck on U.S. Highway 40, east to west, tha City of Craig axpects to complata the First Straet Bypass by the and of 1981. This eliminates most of the haavy truck traffic from tha east to the wast that presently usa U.S. Highway 40, thereby reducing particulate concentration at the sampling site.

As a member of tha Colorado Air Pollution Control Commission the decision waa mada that background particulates from agricultural activities would not be counted against a community for the purposa of ATTAINMENT of NON-ATTAINMENT of total auspendad particulates in air quality measurements. Basad on this fact I dafinitely do not agrae with statements found in Part I, DRAFT EIS COAL, paga 304, Tabla 4-63 Air Quality Matrix, Colorado Air Quality, TSP. Thara is no evidence the annual 75 micrograms/cubic meter standard has been or will be violatad at the mines southwast of Craig or southwast of Hayden. There is also no evidence that the high existing concentrations of TSP around Creig are expectad to incraasa. Just tha opposite conclusion is prasentad in the PEDCo raport of 1979. I quote from page 35 - CONCLUSIONS:

> "The application of the empirical model in Craig was successful in duplicating the air quality trend in 1974, 1976, and 1978. It may be assumed that it is also successful in following tha trend through 1982, although no accurate predictions can be made as to the attainment status of Craig in 1982.
>
> The base year analyses have indicated that over 50 percent of the measured concentrations in all time periods are

probably contributed by sources outside a one mile radius of the sampler. Thia area is mostly agricultural land.

Construction activities have apparently had a measurable effect on air quality. This is most likely due to the major mud and dirt carryout from contruction sites. Since Craig does not currently have ordinances restricting mud and dirt carryout, adoption of such regulations would show attainment of the primary annual standard in 1982. It is possible, however, that this laval will be attainad by 1982 without any control of fugitive dust sourcas. This statement is based on the premises that construction activities and population will both decrease in Craig by 1982."

I therefore believe that the information contained in Air Quality Matrix, Colorado under Air Quality TSP must be changed to properly reflect available data and actual conditions.

Respectfully submitted,

Craig Weaver
Concerned Citizen

CW/lkd

RICHARD D LAMM
Governor

J. A. DANIELSON
State Engineer

9

DIVISION OF WATER RESOURCES

Department of Natural Resources
1313 Sherman Street - Room 818
Denver, Colorado 80203
Administration (303) 839-3581
Ground Water (303) 839-3587

June 10, 1980

MEMORANDUM

TO: STEPHEN O. ELLIS, STATE CLEARINGHOUSE

FROM: HAL D. SIMPSON, CHIEF, WATER MANAGEMENT BRANCH

SUBJECT: GREEN RIVER - HAMS FORK REGIONAL COAL
DRAFT ENVIRONMENTAL IMPACT STATEMENT

This is to acknowledge receipt of the above referenced document dealing with coal mining in northwestern Colorado. We have reviewed the water resource aspects of the study area and have no objections to the document in its present form provided it is understood that any injurious depletion to vested water rights will be mitigated by the lessee of the tract.

Hal D. Simpson

HDS:mvf

JUN 11 1980
DIV. OF PLANNING

10

COLORADO
HISTORICAL
SOCIETY

The Colorado Heritage Center 1300 Broedwey Denver, Colorado 80203

June 5, 1980

Mr. Stephen O. Ellis
Principal Planner
A-95 Clearinghouse
520 State Centennial Building
1313 Sherman Street
Denver, Colorado 80203

JUN 10 1980
DIV. OF PLANNING

Dear Mr. Ellis,

This is to acknowledge receipt of the environmental statement for the Green River-Hams Fork Regional Coal (BLM) #79-149.

DATE RECEIVED May 6, 1980 DATE DUE June 5, 1980

The federal agency has outlined certain provisions in this document for cultural resources management to comply with Executive Order 11593 and the National Historic Preservation Act as amended.

Once these conditions have been adhered to, in consultation with this office, in accordance with 36 CFR 800, compliance will be achieved.

Thank you for the opportunity to comment on the proposed project.

If this office can be of further assistance, please do not hesitate to call upon the Compliance Section at 839-3391.

Sincerely,

for Arthur C. Townsend
State Historic Preservation Officer

Compliance
Form No. 518

11

STATE OF COLORADO
Richard D. Lamm, Governor
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF WILDLIFE
Jack R. Grieb, Director
6060 Broadway
Denver, Colorado 80216 (825-1192)

June 16, 1980

TO : Stephen Ellis
Colorado Clearinghouse

FROM: Jack R. Grieb, Director

JUN 18 1980
DIV. OF PLANNING

SUBJ: Green River-Hams Fork Drsft EIS - Coal

This agency has reviewed the above-referenced document. We strongly disagree with the premise that impacts to the subject area will be so greet without the Federal leasing that the proposed action will make little if any difference. The EIS does not present any dsta to support this premise.

To the contrary, industry projections present a much slower growth rate in coal use than predicted by the EIS. The atstement seems to assume some sort of unlimited demand for coal and seems to presume that all Federel coal will be developed regardless of how much is leased and how much private coal is developed. We feel that the demand for Federal coel will depend inversely on the amount of private coal developed. The State Land Board recently leased 2399 ecres of State-owned coal and one cannot tell from the document if this was considered.

We feel that Unsuitability Criterion 15 either has not been applied to the tracts or that it has been applied incorrectly since the document admits that long-term wildlife impacts will result from the Federal sction. We further know of no attempt by the Bureau of Land Management to subject the tracts to Unsuitability Criterion 10 - State Threatened and Endangered Species.

Specific comments by page are as follows:

P. 5 We feil to see why the Secretary arbitrarily increased the leasing target by 25% after an exhaustive effort by the coal team to establish a valid terget.

P. 13 We feel that due to the increased storage cepacity in the upper Yampe River, the low flows of 1934 will not be experienced egein. We doubt that the Yampa River will ever contain the amounts of sewsge effluent indicated. The statement ssaumes a set smount of private coal will be developed with or without the Federal action. This defies the law of supply and demand, i.e. if more private coel is developed there should be less demand for Federal coal and vice-versa.

DEPARTMENT OF NATURAL RESOURCES, Harris Sherman, Executive Director • WILDLIFE COMMISSION, Michael Higbee, Chairman
Wilbur Rehder, Vice Chairman • Sam Caudill, Secretary • Jean F. Tool Merrick • Vernon C. Williams Member

Stephen Ellis
Coloredo Clearinghouse
June 16, 1980
Page 2

P. 73 This section statea that elk winter on the tracts, snd although winter range does "...limit...population growth," it does not state thet the winter renges are critical, which they are. It further indicates that deer winter ranges are "essential to herd aurvival" but does not admit that deer winter ranges are found on the tracts, which they are. A recent BLM survey indicated e 92% correletion between big game winter ranges and Federal coal reserves. It appears that the Bureau of Land Management may have violated its own Unsuitability Criterion #15 with regard to resident wildlife. If mining of a tract would reault in long-term impacts to the wildlife involved, the tracts should have been deaignated as unsuitable. We know of no attempt, or at lesst no consultation with this agency, to spply Unsuitability Criterion 10 - State Threatened and Endangered Wildlife.

P. 99 The land-use chsngea mentioned have had a profound impact on wildlife as well es the other reaources.

P. 187 Here the document indicates a significant impact to native vegetetion. This would result in a aignificant impact to wildlife dependent upon it and thus the tracts could not hsve pesaed the Unsuitability test.

P. 189, 190 We aimply feel the document has overestimated the impacts without the Federal ection. If the document is correct, the Federel action could well be "the straw that breaks the camel's back" for wildlife.

P. 192 We believe that the sort of wildlife habitat losaes, indicated in the document and the wildlife populetion dependent on them, are irreversible end irretrievable.

(3) We feel it is unwise to completely eliminete big game use from newly reclaimed areas. These sites can stand some use end we prefer to see adjacent ereas of native range fertilized or otherwise beit big game away from newly revegetated aites.

(5) Agein, Unsuitability Criterion 15 specificelly seys sege grouse atrutting grounds are to be found unsuitable. Tracts where e strutting ground would be mined should have been designated unsuitable.

P. 148-200 Economic loas of hunter and fisherman expenditures should be substantiel and ahould be mentioned.

P. 247 Loas of sagebrush and mountain shrub habitats are of High significant, not Moderate-High.

P. 253 We simply cannot agree with Table 4-21. The magnitude of the impacts will certainly be different between the No Action and Maximum Production alternatives.

/d
cc: Olson
Barrows
Whitaker
File: Green River-Hams Fork Coal

MEMORANDUM

OFFICE OF ENERGY CONSERVATION
1600 Downing Street, 2nd Floor
Denver, Colorado 80218
Phone (303) 839-2507, 839-2186

12

DATE: June 5, 1980

TO: Colorado Clearinghouse

JUN 0 5 1980

DIV. OF PLANNING

FROM: Office of Energy Conservation

SUBJECT: Draft EIS - Green River / Ham'e Fork

The Office of Energy Conservation has reviewed tha Green Rivar / Ham's Fork Draft Environmental Impact Statement and offers the following comments.

OEC is greatly concerned with the omissinn nf energy conservation measures in the Draft. During both the scoping and pre-Draft (detailed cumulative analysis) phases, this office has raised questinns relative to energy use to which the Draft does not adequately respond. With today's fuel supply situation and sharply increasing costs, it is imperative that energy cnnservation issues be given serious attentinn when cnnsidering the impact of coal resource development.

In addition to tha economic reasons fnr considering energy conservation in the management of coal development, the Council nn Environmental Quality (CEQ) regulations implementing the procedural provisions nf the National Environmental Quality Act (NEPA), 43 Fed. Reg. 55,978 (1978), requires discussion, within all environmental impact statements (EIS), of the energy requirements and conservation potential of the various alternatives and mitigation measures contained in the EIS. This has been interpreted by CEQ tn include analysis nf total energy cnsts, including possible hidden nr indirect costs, and tntal energy benefits of prnposed actinns.

The Draft (p. 8) under "Issues Nnt Addressed" states that the impacts nf mining coal for electricity generation versus the impacts of nbtaining other energy sources, rather than comparing nnly the impacts nf mining or not mining cnal, had been previously discussed in the Final Environmental Statement: Federal Coal Management Prngram (1979). That FES states (p. 2-27) that only if there are majnr technology advances, up to a 10% reduction in national energy consumptinn could be possible by 1980. In reaching this conclusion, the FES dnes nnt mentinn the nptions nf mass trsnsit, promoting the use of high occupancy private vehicles, increasing energy efficiency in land uses, nnr utilizing existing apprnpriate alternative technologies. In the recent study Energy Future (1979), by the Harvard Business School, it is stated (p. 136) that through utilization nf existing technnlogy, energy cnnsumptinn natinnwide could be cut by 30% to 40%. In light of this seeming discrepancy, a reappraisal of the impacts of the conservation energy prnductinn alternative seems appropriate.

The "net energy analysis" which appearen in the Detailed Cumulative Analyses now appears fnr only three of the 16 prnpnsed tracts. Such an analysis of energy costs relative to energy produced is critical to evaluating the impacts. OEC would like tn see this omission corrected on a site-specific basis in the Final EIS.

According to the Federal Coal Management Program FES (p. 5-179) the principal use nf coal is electric power generation. The FES further notes (p. 5-170) that the thermal efficiency of steam-electric power plants is 35% on the average. This end use, when factored into the net energy analysis, could significantly modify the ratio of energy input to energy output.

The need to provide energy-efficient transportatinn to and from the mines appears also as an "Issue Not Addressed" (p. 9). Ths Preferred Alternative (p. 23) projects a 7% to 40% increase in average daily traffic (ADT) in the impacted areas. How does the ADT relate to an increase in the vehicle miles traveled (VMT)? It seems reasnnable to assume an accompanying increase in energy consumptinn. OEC is cnncerned that this projected increase in fuel consumption by private vehicles, because of population growth and subsequent increasa in VMT to the mines, commercial districts, recreation areas, et cetera resulting either directly or indirectly from Green River / Ham's Fork develpment, must be discussed in the EIS as more than "Uncommitted Mitigation" (p. 218).

OEC suggests that leaseholders be required to mitigate, to the greatest possible extent, the energy impacts of coal development. Utilization nf ths most energy efficient methnds to transport coal to its end use markets, employee ride-sharing programs, and life-cycle costing of energy-consuming equipment are just a few of the possibilities.

The DEIS (p. 57) states that electricity and natural gas systems are "generally adequate for the region, with some exceptions". The question of the sources, and their adequacy, on a site-specific basis is not addressed. Will additional generating capscity and/nr new transmissinn lines be required tn implement development plans?

13

Department of Local Affairs
Colorado Division of Planning
Philip H. Schmuck, Director

Richard D. Lamm, Governor

MEMORANDUM

DATE: May 30, 1980

TO: Steve Ellis
Colorado Clearinghouse

FROM: Philip H. Schmuck

SUBJECT: Green River-Hams Fork Regional Coal DEIS
#79-149

The Division of Planning has reviewed the draft EIS on the proposed coal leasing program for the Green River-Hams Fork Coal Region. That review has been focused only on that part of the proposed action that would effect Colorado; we make no comments concerning any aspect of the program as it relates to Wyoming.

The Statement appears to address the range of likely impacts of the various alternatives in a thorough and straight forward manner. There is some difficulty in determining the degree of impact from any of the alternatives because they are all relative to a baseline about which little information is provided. Because of the importance of the baseline, we feel it would be constructive to describe the major elements that went into calculating that scenario.

The Division's general concern in the following comments is that the production targets have been set and coal leases proposed that will result in very great costs to the producing area. These costs, as described in the EIS, are so great that the leases and production goals seem to have been set without fully taking into account the toll at the local level of meeting national goals. We believe that the cumulative costs of coal development to some of the communities in the producing area (taking into account both the proposed action as well as additional coal, oil shale and other developments in the Colorado portion of the Green River-Hams Fork Region) are unacceptably high. The most fundamental question here is: How was the target production figure of 520,000,000 tons computed? Page 5 of Part I briefly summarizes the administrative actions that have taken place in reaching this figure but gives no idea of the techniques or data used in making the basic determination. Because everything else follows from the computation, we believe it should be open to analysis. There is no information in the EIS to suggest that the production figures took into account the local costs of meeting estimated national coal needs. The most

520 State Centennial Building, 1313 Sherman Street, Denver, Colorado 80203 (303) 892-2351

significant factor underlying these various costs is the population growth that energy resource development will bring. That growth, based on figures from the EIS, results in compound annual growth rates of 14.8% for Meeker, 10.2% for Craig and 7.2% for Hayden for the nine year period from 1978 through 1987. These rates are staggering and, as the EIS notes, puts Meeker "in danger of socio-structural breakdown over the next dozen years". The EIS attributes the vast majority of that growth to energy resource development other than the proposed action, but states that "all alternatives become aggravating factors on an already overloaded situation". We feel that taking steps to make an already bad situation worse without substantially more commited mitigation than is proposed in the EIS is poor public policy.

While the costs of the projected population growth include the physical impacts to the resource itself, air, water, soils, wildlife and cultural and recreational resources, of more particular concern to the Division of Planning are the effects energy resource development in general will have on the social and economic fabric of the Region's communities. The growth rates mentioned above are documented in numerous studies and in this EIS as substantially increasing rates of divorce, alcoholism, family problems, crime, delinquency and a host of similar problems. The advent of large numbers of new persons of different backgrounds effects the existing political and social structures, reducing the sense of predictability so important to individual and social stability. The availability of lower paid service and agricultural workers will be reduced as they are attracted to higher paying jobs. The need for public facilities and services at a rate that will keep up with demand will outstrip local financial resources by several fold and the shortage of such facilities and services can be said to compound the social problems mentioned above. Housing will be scarce and the scarcity will result in some individuals living in grossly inadequate housing for some period of time. A longer term cost will be the increasing dependence of the region on a single industry economy that is subject to cyclical swings.

We suggest that, while national needs and coal location and economics clearly need to be major factors in setting regional target coal production levels, so do the effects such targets will have on land use, social, economic and other community considerations in the target area. Where independently computed coal production targets appear to be likely to result in significant negative impacts to communities, such as those described for Meeker and, to a lesser extent, to Craig, production targets should be modified to bring such impacts down to acceptable levels by reducing tonnages, phasing resource development, letting leases only for extension of existing operations or some combination of other techniques. Agreement on "acceptable levels" may be reached by meetings between BLM, state and local officials. The present procedure does not give any evidence of having taken local impacts into account in the setting of the target production level. Rather, the targets appear to have been set using other criteria, with the problems that the targets cause being identified later and incomplete litigation measures being proposed.

We urge BLM to balance alternative regional coal production possibilities against local impacts prior to the actual setting of production goals, and to take into account local impacts before the basic decisions are made that make those impacts inescapable and very expensive to deal with. Until this is done, the EIS is no more than a document added into a process after the significant decisions have been made and the EIS is consequently of limited usefulness.

PHS/amn

14

Richard D. Lamm, Governor

Colorado
Department of Local Affairs

Paula Herzmark, Executive Director

MEMORANDUM

TO: State Clearinghouse

JUN 09 1980
DIV. OF PLANNING

FROM: Steve Colby, Division of Impact Assistance

DATE: June 9, 1980

RE: Green River-Hams Fork Draft EIS (Coal)

Review of the Draft EIS sections on socio-economic impacts indicates a fairly comprehensive analysis. The authors should be complimented.

Although the population impacts of the proposed actions are only a portion of larger changes in the affected area, they are quite significant. The "preferred high" coal leasing alternative will increase population by 6,800 over and above a population increase from 50,000 in 1980 to 75,000 in 1995 which the study projects under the "no action" alternative. The Draft EIS discusses the many short-term "overload" situations that will result stressing the uncertainty and planning problems that undermine long-term mitigation. Unfortunately, their discussion of mitigation is quite general and refers the problems to other agencies.

While the merits of mine development scheduling and local program planning are emphasized, no mention is made of BLM responsibilities in this regard. We would contend that the leasing agency is in a strategic and powerful position to support these "keys to socio-economic impact mitigation. Hopefully, the final EIS will more directly discuss BLM actions along these lines.

SC:kl

1313 Sherman Street, Room 518, Denver, Colorado 80203 (303) 839-2771

15

Richard D. Lamm
Governor

Morgan Smith
Commissioner

Donald L.Svedman
Deputy Commissioner

STATE OF COLORADO

COLORADO DEPARTMENT OF AGRICULTURE
406 STATE SERVICES BUILDING
1525 SHERMAN STREET
DENVER, COLORADO 80203

Agriculture Commission

Ben Eastman, Hotchkiss
Chairman

John L. Malloy, Denver
Vice-Chairman

Henry Christensen, Roggen
Elton Miller, Ft. Lupton
Don Moschetti, Center
William A. Stephens, Gypsum
William A. Webster, Greeley
Clede Widener, Granada
Kenneth G. Wilmore, Denver

MEMORANDUM

DATE: June 5, 1980

JUN 06 1980
DIV. OF PLANNING

TO: Stephen O. Ellis, Colorado State Clearinghouse

FROM: Jim Rubingh, Colorado Department of Agriculture

SUBJECT: Green River-Hams Fork Draft EIS

The Colorado Department of Agriculture wishes to make the following comments on the draft EIS:

1. Agricultural labor supplies. The Draft EIS accurately points out how this proposed action may impact the availability of agricultural labor and the problems which could occur if agriculture within the region declines and the area becomes economically dependent on a single industry - energy minerals. Mitigation called for includes efforts to attract different types of industry to the area. In addition to this should be mitigation measures which would help agriculture to survive as a viable industry within this region. Mitigation which would assure a reliable source of labor to the agricultural sector is particularly needed. Such actions could include procedures for allowing alien labor to work on a long term basis on ranches within the region or other types of programs which would help ranchers locate individuals who are seeking agricultural employment. Such a program would be of benefit to both the local ranchers and to the region by helping to maintain agriculture as an important industry within this region.

2. Local Planning Needs. The Draft EIS points out the need for land use planning and zoning at the local level. A summary of existing comprehensive plans and their adequacy for dealing with the anticipated growth which would result from this proposed action should be included within this analysis. With this information the level of planning assistance which will be required by local governments could be more readily identified.

The Bureau of Land Management should be commended for its efforts to work with the state and incorporate the state's concerns into this analysis.

16

MAYOR
EVERETT E. MANN

City of Rawlins Wyoming

CITY COUNCIL
GLEN WOODSBURY
JUNE R. AYLSWORTH
STEVEN L. OLSON
ARTURO ARCHULETA
DeSARI MARTINEZ
DON COMEAUX

June 24, 1980

Dave Willard
Bureau of Land Management
Box 248
Craig, Colorado 81625

Dear Mr. Willard,

Enclosed is a copy of the Catalog of Public Facility Needs in Carbon County, Wyoming. Please add this information to the final impact statement for the Green River-Hams Fork area.

Sincerely,

Harold W. Young

Harold W. Young
City Planner

HWY:kac

Enclosure

P.O. Box 953 • Rawlins, Wyoming 82301

17

United States Department of the Interior
NATIONAL PARK SERVICE
ROCKY MOUNTAIN REGIONAL OFFICE
655 Parfet Street
P.O. Box 25287
Denver, Colorado 80225

IN REPLY REFER TO:

L7621 (RMR)PC

JUN 25 1980

Memorandum

To: EIS Team Leader, Craig District Office, Bureau of Land Management, Craig, Colorado 81625

From: Associate Regional Director, Planning and Resource Preservation, Rocky Mountain Region

Subject: Review of draft environmental impact statement for Green River-Hams Fork Coal, Colorado and Wyoming (2 Vols.) (ER 80-33)

We have reviewed the subject documents and didn't identify any adverse impacts from this proposal on the nearest units of the National Park System, Dinosaur National Monument and Rocky Mountain National Park. We do have a general concern about air and water quality in the region, but these issues appear to be adequately addressed.

Richard A. Strait

Year of the Visitor

18

UNITED STATES DEPARTMENT OF AGRICULTURE
FOREST SERVICE
Rocky Mountain Region
11177 West Eighth Avenue, Box 25127
Lakewood, Colorado 80225

JUN 30 1980

1950

EIS Team
Bureau of Land Management
Craig District Office
P. O. Box 248
455 Emerson Street
Craig, Colorado 81625

Gentlemen:

Thank you for the opportunity to review the Draft Environmental Impact Statement for the Green River - Hams Fork Regional Coal.

Our review finds no mention of the effect on the air quality related values in Class I air quality areas.

The Mt. Zirkel and Flattops Wilderness are down wind of proposed coal mines in the Yampa Valley. Emissions from exiating power plants and thoae under construction may be approaching the limit for air quality degradation over these Class I areas.

The Final Statement should specifically show anticipated air quality impacts on all Wilderness.

Sincerely,

for, Larry Lawson

CRAIG W. RUPP
Regional Forester

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Sierra Club
Rocky Mountain Chapter

"...TO EXPLORE, ENJOY AND PRESERVE THE NATION'S FORESTS, WATERS, WILDLIFE AND WILDERNESS..."

SIERRA CLUB
ROCKY MOUNTAIN CHAPTER
2239 E. Colfax, #206
Denver, Colorado 80206
(303) 321-8292

July 3,1980

EIS Team Leader
Bureau of Land Management
Craig District Office
P.O.Box 248
455 Emerson St.
Craig,CO; 81625

Dear Sir:

The following comments on the Green River-Hams Fork Coal DEIS (hereafter DEIS) are offered on behalf of the Rocky Mountain Chapter of the Sierra Club. They consist first of some general comments, followed by specific comments on material on the pages indicated.

In general, BLM has not justified the need for more coal leasing in this document, and has not discussed what seems to us a more likely scenario-- that old leases and PRLA's, totalling some 25 billion tons, and with low royalties, will be developed first before the new leases discussed in the DEIS. These pose the real problems and the real impacts. Of course, some of these basic ideas were thrashed over last year when the Federal Coal leasing program was started up again, but our view is that the Government has not really addressed the concerns raised then. If there is no real economic need for leasing, relative to the current western supply under lease already, and eastern overcapacity then the present proposal seems quite pointless to us, and the DEIS is basically a meaningless document, even if one accepts its statements of impacts as technically accurate.

Another basic question we have is that of how unsuitability criteria have been applied to these tracts. BLM has used its own LUC's, rather than those defined by OSM, to eliminate unsuitable areas. There appear to be considerable differences between the two - the OSM list seems to be more restrictive - which might eventually result in the elimination of tracts down the road.The issue of alluvial valley floors seems a potential area of trouble and conflict with OSM (we certainly hope, at least, that OSM will stick by its guns here). Wildlife impact is also a potential problem as far as rendering lands unsuitable; in meetings last year on the Williams Fork Mountains coal leases, it was obvious the BLM did not have sufficient information to judge impacts on deer and elk. The attitude appeared to be "that's the State's concern, and besides, mitigating measures will prevent significant harm". Concievably true, in a development vacuum, but otherwise suspect.

1627 Vine Street Denver, Colorado 80206 303-321-8292

The third general problem is that there is an inaccuracy in the baseline scenario used for purposes of comparison to new leasing impacts. We understand that this inaccuracy, which amounts to a substantial fraction of the presumed baseline production rate , has been pointed out before and essentially acknowledged by BLM. Why does it appear again, if that is true? Use of a too high baseline results in an underestimation of all the relative impacts resulting from new lease development. The practical impacts from the new lease areas may be negligible alright, but for the wrong reasons. Mistakes like this make the entire exercise of this DEIS look shoddy and unreliable to concerned citizens. Does the BLM mean to have this DEIS represent the quality of professional work that might come forward in future coal leases ? Can BLM be trusted to protect the public interest as far as coal development is concerned ?

Specific comments are:

1) Page 6 - We understand that the Colorado State Historic Preservation Office was not consulted throughout the process discussed here, or their comments were not included. Why is this ?

2) Page 6 - DEIS states that the Wyoming data is "acceptable pending further study" and that further information will appear in the Final EIS. We hope that this will occur, but obviously no member of the public will be able to judge the substance of this statement or have any meaningful input about its substance by that time. We have no guarantee that this is more than a pious hope.

3) Page 41 - It is apparent from this matrix that a lot of data is lacking, especially data pertaining to surface and ground water and socio-economic impacts. In fact, in all cases,there are no conclusions made for the Preferred Alternative in any of these problem areas. Data for land use impacts are completely absent, yet especially for the "direct land use impacts" category, one would expect such data to be fairly easy to obtain. We were not able to find any statements of impacts on threatened or endangered species.

4) Page 51 - In 5 of 7 tracts, it has been assumed that extensions and upgrading of rail lines will occur to move the coal to market. We are not convinced that this assumption is realistic

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given the problems railroads seem to be having generally in maintaining existing stock and trackage.

5) Page 52 - The lack of data on secondary land use impacts is evidenced in the non-existence of data on housing and infrastructure impacts. Can any reader (or DOI employee for that matter) make reasonable judgements or decisions in such a data vacuum ?

6) Page 57 - The description of the existing enviroment paints a beautiful picture of parks, rivers and open space. The unfortunate truth is that present coal mines produce considerable direct and indirect visual decrements which are softpedalled in the DEIS.

7) Page 60 - The statement that the "potential for resource conflicts (oil and gas) exists" is of course true but resurrects the basic questions of how conflicting land uses are to be resolved, and how great the cumulative impacts are of such conflicting and concurrent developments. The DEIS does not, we believe, do a good job on the latter question in particular.

8) Page 61 - How about an assessment of the impacts of the sand and gravel operations that will accompany local development? People in the Front Range are beginning to feel sand and gravel derived land use problems acutely. The same may hold for the Green River-Hams Fork area.

9) Page 66 - Another statement without visible means of support occurs here: "no significant impacts would occur to any alluvial valley floor". In the absence of final OSM criteria on AUF's, how can we trust this?

10) Page 81 - The DEIS states here that the projected 24% population increase in the region by 1987 will result in a decrease in the quality of recreation in the region.That seems logical enough, but there are no conclusions put forward for this type of impact from the new leasing. It is hard for us to judge just what conflicts there are between recreation and coal lands - for example, are impacts direct or indirect - because the data presented do not allow secure judgement.

11) Page 82 - What is the source of the figure in the statement

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that "70,000 acres are to be disturbed by coal,gas,oil and uranium not associated with new leasing"? Does the coal contribution include old coal leases or PRLA's?

12) Page 87 - There is a proper admission here that socio-economic impacts will be (and are already) severe without new leasing, but the data seem obscure to us and there seems not to be a discussion of mitigating measures. If the present housing shortage is bad enough, how can communities deal effectively with new leasing impacts? Unfortunately, the Government seems much more adept at creating such problems than solving them in Colorado - coal is only the most recent example.

13) Page 103 - Average noise level comparisons are made using USDOC data based on population densities. Such comparisons may often be misleading; for example, consider a virtual industrial district like Craig compared with a rural town in, say, Utah,of the same population density. A more sophisticated approach is needed here.

14) Page 176 - It is concluded here that ground water impacts would be limited to the "short term and local".However, the potential alluvial valley floor problem may enter into this discussion as the result of OSM's decisions; in that case,a "local" impact may become very significant. Moreover,"short term" is relative. The ground water impacts from the Edna and Energy Fuels mines, for example, may last as long as 500 years.

15) Page 178 - We think it unwise to assume that the Energy Fuels experience is a good model for coal development and impacts for the rest of the region. Energy Fuels appears to be doing a markedly more careful job than mines currently operating in the vicinity, in part by their own volition . Can we reasonably expect this to be a standard for the future?

In short our conclusions about this DEIS are that assertions tend not to be well supported by facts, or if they are, the connections between assertions and facts are obscure. Often where the state - ments are clear, the assertions seem to be factually incorrect , and by large margins (c.g. the baseline case production levels).

Finally, we are completely unconvinced by this document that the whole leasing rigamarole makes economic sense, are certain that

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most of it makes environmental nonsense, and have concluded that the coal leasing program has become just another casualty of the 1980 election. Reading this DEIS has been a more frustrating and depressing experience than usual.

Sincerely,

Sarah Branson

Sarah Branson
for Rocky Mountain Chapter

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to: BLM, DEIS Team Leader July 2, 1980
RE: Coal Leasing DEIS

Dear Team Leader:

Upon review of the Green River-Hams Fork Regional Environmental Impact Statement we find two areas of concern to us.

The first is the somewhat passing mention of the endangered species of fish which exist in the Yampa River. These native fishes should not, and we feel cannot, take a back seat to increased coal development for the greater century of energy to be derived from these regional projects. We do not see justification for further threats to these species.

Also, the size of the two volumes has little relation to the information contained within. In a number of areas no data is presented or evaluated. The question is this,

Can we make a judgement on leasing proposed areas with so many parts left out? A deadline has been set, and should if at all possible be met, but to meet a deadline with only partial data would seem more detrimental to the environment than to miss a deadline for the sake of more information and accuracy. After all, that's what these statements are for.

Thank you for an opportunity to comment

Sincerely,

Pat Thompson
Yampa Valley Action Group
644 Rose
Craig, Co, 81625

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United States Department of the Interior
BUREAU OF MINES
P. O. BOX 25086
BUILDING 20, DENVER FEDERAL CENTER
DENVER, COLORADO 80225
Intermountain Field Operations Center

July 3, 1980

Memorandum

To: EIS Team Leader, Bureau of Land Management, Craig District Office, P.O. Box 248, 455 Emerson Street, Craig, Colorado 81625

From: Chief, Intermountain Field Operations Center

Subject: Review of Draft Environmental Impact Statement, Green River-Hams Fork Coal Region

The subject DEIS, prepared by the Bureau of Land Management, has been reviewed by personnel of the Bureau of Mines. The primary purpose of the draft statement is to address the environmental consequences of five leasing alternatives for thirteen tracts of Federal coal reserves in the Green River-Hams Fork Region of northwestern Colorado and southwestern Wyoming. The study area covers 37,000 square miles in five counties of Colorado and twelve counties in Wyoming.

Mineral resources known to exist in the study area include oil and gas, phosphate, rock and stone, vanadium, trona, uranium, and clay minerals. Some of these mineral commodities have been produced in the counties covered by the report, but few appear to be affected by any of the leasing proposals. Oil and gas appear to be the only resources indirectly affected by the proposed leasing plan. As mentioned in the report, oil and gas would not be permanently removed from production, and delays in development or production would be short term. Each lease tract analysis explains what, if any, pipelines would have to be relocated during development of the lease tracts. Known mineral resources in the proposed lease areas are covered by the DEIS, and no significant adverse effects on these mineral resources are anticipated. We, therefore, have no objection to the leasing program or the DEIS as written.

The increased production of 789.5 million tons of coal from this region would help meet U.S. energy production goals, increase employment in the study area, and allow existing coal mines in the area to continue mining operations.

Joseph B. Smith

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UNIVERSITY OF COLORADO AT BOULDER
Boulder, Colorado 80309

INSTITUTE OF BEHAVIORAL SCIENCE

July 3, 1980

Dan Martin, Team Leader
BLM Craig District Office
Post Office Box 428
Craig, CO 81625

Dear Mr. Martin:

I have been asked by your office to comment on the Green River-Hams Fork Draft Environmental Impact Statement. Most of my comments will refer to the demographic and social impact portions of the DEIS; I am a demographer who works in the area of social impact assessment. However, I do have several general comments which pertain to most of the DEIS:

General

1) Not enough documentation has been provided to allow evaluation of the DEIS. This is a serious omission which invalidates the review process.

2) How are cumulative impacts calculated? At one point the DEIS states cumulative impacts are not additive, but I was not able to find a formula for cumulation.

3) Since most of the conclusions are based on the comparison of No Action alterative estimates with estimates for coal leasing plans, the No Action estimates are very important. And yet I was not able to find the assumptions or data used to make the No Action estimates. The discussion on page 9 is not clear, but seems to indicate that the No Action estimates are inflated. If so, the estimates for the impacts of the various coal leasing alternatives are biased, and artificially low.

4) There was a very heavy reliance on already available data with no evidence of evaluation of the quality of those data. Some of the demographic data are quite questionable.

Demographic

Since social, economic and many other impacts are directly related to the growth, composition, distribution, and turnover of the population resulting from coal leasing, the population projections are one of the most important components of an EIS. The DEIS does not provide the assumptions and methods underlying the population projections and so it is not possible to evaluate them. As you know, the basic assumptions are

sxtremely important in population projections and, unlsss these assumptions ers well grounded in theory end empiricel reelity, the rsults may bs highly ineccurete. For instance, what household and secondary employment multipliers were used; whet trends for unemployment ratss and labor forcs participation ratas were used?

According to tha BLM Denver Office, an sconomic-dsmographic input-output model wes used to make populetion projsctions. Thsss models requirs a grsat deel of very specific data, yst no mention was mads of these data or the assumptions of ths model. Nor were ths sssumptions rsgarding ths changes in the characteristics of the populetion noted, sven though such assumptions muet underlie tha astimatee for impacts releted to housing, schools end services.

It wes steted thet e grevity model was used to estimete the distribution of inmigrants. Unfortunately this method of estimating distribution hes been found to be quite ineccurete for rurel erses. (Sse srticls by Murdock, Wieland and Leistritz in Land Economics, November, 1978.)

Anothar important damogrephic espect not discussed is the rete of turnover in the populetion. Gilmore and othars heve found high turnover retes to havs serious negative sociel and aconomic consequences for the community end for the employar.

Sociel Impacts

Tha Sureeu of Land Management is to be commended for its treetment of social impacts and the resulting lagitimizetion of such concerns. The review of the litereture end the inclusion of genuins sociel impacts es distinct from sconomic impacts, services or infrestructure makes e reel contribution to sociel impact assessment (SIA). Unfortunetely, despite thie vest improvement, the SIA is not edequete:

1) Inedequeta or missing information about deta, assumptions, methods.

2) No clear dsfinition of sociel impacts.

3) Over relience on very limitsd eveilable dete. I reelize the constreints impoeed by OMB maks the collection of deta through surveys very difficult, and yst until we know much more about energy boom towns such surveys are sssential for edequete social impact esseesment. Although it was very flattsring to sse such heevy reliance placed on my work, this study wes clearly labeled as sxploretory end was not meant to be used ee e thsorstical or ampirical foundation for SIA.

It is significant thet BLM in Washington hes ecknowledged ths inadsquacies of theory and methods for SIA by issuing a request for proposals for s major reseerch effort in this erea. I must question why coal lsasing of this magnitude could not wait until this reseerch wsre complsted.

4) Conclusions about the significance of impacts wers frequantly based upon rether erbitrerily established thresholds.

5) The SIA did not fulfill BLM's own requirements. Although ths Nstionel Environmental Policy Act does not define sociel impacts, the BLM Denver Offics hes developed e list of sseential "dete elements". I understand this list is at least partly in response to the suit over insdequats snvironmentel impact essessment which resulted in a moratorium on coal leasing until better methods were devised. As far as I can tell, bsttsr methods of SIA heve not bsen devised. Insteed, BLM has creeted a list of dssired information, e liet which is not accompanied by theorstical or empirical justificetion or methods for meeeurement. This SIA does not include many of these eseantial deta elements, and much of the information it does include is anscdotel et beet.

Unavoidable Adverse Social Impacts and Mitigetion

A vsry positive feature of this SIA is its inclusion of genuine social concerns, rethsr then the usuel concentretion on services, fecilities and infrestructure, and its linking of incrsased retes of social problems to rapid growth end chenge in the populetion. (Turnover in populetion ehould also be included.) Sut whils it identifias inflation, wege pressures, capitel expenditure requiremente, deterioretion of servicse, and housing shortages es unevoidable edverss impacts, it feils to mention the ganuine social concerns that wers so well dsveloped in the serlier discussions. It is not evident why some impacts ere labeled unevoidable end some ere not. Moreover, those impacts listsd and any other impacts ere not unevoidable unless the predictsd population dynamics ers taken as givens.

In fect, ratss of growth, turnovar, and changs in ths population can be adjusted. For instance, the timing and magnituds of coel production schedule cen be edjusted, policies and programs to maximize ths hiring of local rssidents and nswcomer spouses, commuting, and rstention of newcomer workers can be initiated.

We seem to be lockad into the idee thet advsrss impacts will occur and the only solution is to mitigets or cure the resulting problems, es illustrated in the ssction on uncommitted mitigetion. Curetive strategies are costly, they ere not aveilable to ell, and there are many problems which ere not curable. Another solution to nsgetive impecte is through prevention of the impacts and/or ths resulting problems. This is a lsse costly and e preferabls method which ie not eddrsssed in this SIA.

In sum, not anough information has been provided to thoroughly eveluate this SIA. Neverthelsss, there is enough information to conclude thet, while ths importence of sociel impacts hes been setablishsd, ths eesessment itsslf and consequsnt mitigetion strategiss are not substantially better than the ones that led to e lsgel suit and moretorium on coel leesing.

I want to make it clsar that I do not believe the Sureau of Land Managemant sociologist(s) working on this SIA ere et fault. Ths constraints on this projsct, including e ridiculously short time to prepare the EIS, limitad steff, and the inability to collect primary deta, ee well es the absance of thsory and methods for SIA virtually guerenteed these results.

I urge ths Secretaries of Interior end Energy to postpone tha proposed coal leesing until this impact stetsment has been rsvised, and rewritten in e way that will allow its svaluation. Otherwise, impact essessment will heve been reducsd to e maaninglsss formality. Ths insistence on beginning coel tract leasing befors tha 1980 elections may be viewed as e cynicel politicel ect taksn without considsration for the well being of the residsnts of Coloredo and Wyoming.

Sincersly,

Elizabeth Moen

Elizabeth Moen
Assistant Professor, Sociology
Projsct Dirsctor
Instituta of Seheviorel Science

EM:ig

cc: Stevs Ellis
Phil Schmuck
Eleine Zielinsky

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JOHN A. MacPHERSON
T. MICHAEL GOLDEN
KERMIT C. BROWN
CATHERINE L. DIRCK

July 3, 1980

Mr. Dan Martin
Craig District Office
Bureau of Land Management
P.O. Box 248
455 Emarson Street
Craig, CO 81625

Re: Green River-Hamms Fork
Draft Environmental Impact Statement

Dear Mr. Martin:

This statement is made as attorney for various land owners having holdings on the north, east, wast and south side of the Red Rim-China Butte proposed mine site as well as being the attorney for the land owners within the proposed mine site itself. We have reviewed the draft environmental impact statement particularly as it pertains to the Red Rim-China Butte area. Our review leads us to the conclusion that while there was a great deal of effort, especially considering the short time involved, put into the statement nonetheless there is a failure to address the effects of letting federal coal leases within the checkerboard land grant pattern where every other section is privately owned. At page 8 of Volume I under the headings "significant issues addressed" the following is found:

> The concerns of private land owners whosa land is adjacent to or within the delineated tracts must be considered. This is especially true of private surface and subsurface located within the tracts in the checkerboard land-ownership pattern area of Wyoming.

Yet, despite this fact the draft statement, in the final analysis, does little to address the issues or concerns of the private land ownar within the checkerboard land pattern.

While the land owners have been assured there will be no federal leasing unless they consent, the final environmental impact statement should more adequately address the checkerboard land ownars' concerns and the impact of federal leasing on their operations, both economically and otherwise.

Despite these negative comments, on balance, but in general terms only, the surface owners within the Red Rim-China Butte area are not opposed to the letting of federal leases if certain restrictions and procedural guidelines are adhered to so as to assure mitigation of financial impact upon such surface owners. Land owners are concerned about the apparent non-compromising attitude advocated by some when considering federal leasing. They understand that it is easier to be against something than for something but feel the need for recognizition of addressing the energy questions facing our country today. They maintain a realization that the facing of such problems must be both direct in approach and solution.

They realize that it is easy to defer answering tough questions by "copping out" with responses that advocate that "future studies must be completed" or that "the answer should be deferred until a later time." These decisions to maka no decision cannot continue if the energy problems this country faces are every going to be solved in a responsibla way.

The land owners recognize the impact of the proposed mine site on wildlife and the environment. Ecology is as important to their operation as it is to anyone else. For the most part the land owners involved come from old, established, historic livestock operators within the area. However, they also recognize that people are important and there must, of necessity, be compromises negotiated since seldom facts are totally black or white.

The key words in finding a solution appear to be "discussion," "compromise" and "conciliation". There are a number of measures which could be taken to address the wildlife concerns including but not limited to those advanced by the BLM as follows:

1. Improvement of the habitat within the China Butte area.

2. Improvement of the carrying capacity on all lands both within and adjacent to the mine site for both domestic and wildlife use.

3. Reduce the impact through proper mine planning.

4. Develop an emergency feeding program, particularly for severe weather conditions.

The land owners would endorse these efforts provided that if such measures result in economic losses to their operations that these economic losses are also addressed. While it may be said that in general conceptual terms the land owners are not opposed to the letting of federal leases and mining of the area such consent is based on the assumption that the specific mitigation measures are presented and discussed with them prior to their adoption and that the economic repercussion created by such mitigation measure be addressed in a proper forum.

In arriving at the final plan it would appear to be appropriate that BLM prepare specific plans of mitigation so that these specific plans of mitigation could then be reviewed with the BLM, Wyoming Game and Fish Department, Rocky Mountain Energy Company and those mining companies expressing a geniune interest in the federal leases. The input of Rocky Mountain Energy Company and those mining companies having an interest in the federal leases are a necessary and integral part of such discussion since in the final analysis it is these companies that are going to have to address the economic impact such mitigation measures will have on the land owners. Some consideration should be given to tying the mitigation solutions as conditions to the federal leases. This would assure that the concerns of the land owners would be addressed by those who will ultimately reap the financial rewards so that the land owners are not saddled with an undue economic sacrifice.

In conclusion we urge a "discusssion," "compromise" and "conciliation" approach to all parties. If this approach is not followed, sides will polarize and the result will be a direct confrontation; a confrontation with an all or nothing design. However, there will really be no winners in such a battle only losers.

Respectfully submitted,

John A. MacPherson

JAM/sw

cc: Cecil Roberts
Stan MaKee
Gary Wicks
Warren G. White

DEPARTMENT OF ZOOLOGY AND PHYSIOLOGY

TELEPHONE (307) 766-4207

THE UNIVERSITY OF WYOMING
UNIVERSITY STATION, BOX 3166
LARAMIE, WYOMING 82071

24

July 1, 1980

Green Rivsr-Hamms Fork Regional Coal Team
% Bureau of Land Management
Craig, Colorado 81625

Dear Sirs:

This letter is in response to the recent public meetings inviting comments on a proposed lease for coal mining in the Red Rim-China Butte erea southwest of Rawlins. Thers hae besn some controversy eurrounding mitigetion of crucial antelope winter habitats, especially those on Red Rim. I've been involved in ths area by directing a pronghorn research project which began in July 1979 and will continue through the end of 1981. One of the major reasone for the etudy was to provide information to aid in the decision on a change of status from "suitable pending further study" to "suitable for mining". Major objectives of our research ere to define seasonal home ranges, habitat use patterns, and movements of antelope in relation to weather, snow conditions, topography, and vetationel conditions, and to suggsst means for minimizing or mitigating impacts. The research is supportsd by the Rocky Mountain Foreet and Range Experiment Stetion, Bureeu of Land Management, Rocky Mountain Energy Company, the University of Wyoming's Department of Zoology and Physiology, and the Wyoming Game and Fish Department.

In November of 1979 we trapped antelope in 3 locetions on Red Rim, plecing radio-transmitter collars on 20 animals and recognizable neck bands on 116 others. While we monitored those animals on a rather low-intensity basis during the 1979-1980 winter, we did determine some patterns. Marked animalsmovsd from Red Rim to the north elong Interstate 80, to the eest neer the Sage Creek Road, and to the south toward Muddy Creek and Baggs. Many other marked animals were among the 1200-1300 which wintered on or near Red Rim. That information wes contained in our first progress report dated March 1980.

In that report we stressed that pronghorn behavior was much more complex than imagined, and we steted elso that the data were tentative and most definitely inconclusive.

However, it appeers that some people involved in the deliberetions have made definitive statements based upon our data. Therefore, I wish to remind the Regional Coel Tsam that the study is far from complete, and that conclusions based upon our preliminery date must be viewed as being subject to error. We are currently producing our second progress report, which will be made eveilable eerly in July 1980.

Since other statements have also involved conclusions based on littls or no factual data, a decision on leasing would only represent a "best estimats, based on current information". Therefore, I believe that a strong effort must be made to gather solid, factual information.

However, if a decision must be made before studies are completed, I recommend that cooperators should complete an agreement to closely monitor all important wildlife populations and their habitats in ordsr to dstermine if what was predicted in terms of losses or mitigative measures actually occur.

Sincersly yours,

Larry L. Irwin
Assistant Professor of Zoology

cc: A.L. Ward, D. Strickland,
D. Moody, B. Hamilton,
R. Guenzel, C. Yde, F. Wolf,
D. Preston, R. Jenkins

LLI:mld

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United States Department of the Interior
HERITAGE CONSERVATION AND RECREATION SERVICE
MID-CONTINENT REGION
POST OFFICE BOX 25387
DENVER FEDERAL CENTER
DENVER, COLORADO 80225

IN REPLY REFER TO:
DES-80/33

JUL 2 1980

MEMORANDUM

To: EIS Team Leader, Bureau of Land Management
Craig, Colorado

From: Assistant Regional Director, Land Use Coordination

Subject: Review of draft environmental impact statement for Green River-Hams Fork Regional Coal

As indicated by the State Historic Preservation Officer for Colorado (p. 492), the Bureau of Land Management has a responsibility to fully comply with all regulations pertaining to the protection of cultural resources prior to the awarding of leases. This should include not only surveys, but also determinations of eligibility pursuant to 36 CFR 63 and, for those eligible resources within areas to be affected, compliance with the procedures of 36 CFR 800. Documentation of the consultations and procedural compliance should be provided in the final statement.

for Robert F. Stewart
Robert J. Arkins

26

United States Department of the Interior
FISH AND WILDLIFE SERVICE
AREA OFFICE COLORADO—UTAH
1311 FEDERAL BUILDING
125 SOUTH STATE STREET
SALT LAKE CITY, UTAH 84138

IN REPLY REFER TO: (ES) July 3, 1980

Memorandum

To: EIS Team Leader, BLM - Craig, Colorado

From: Area Manager, Salt Lake City

Subject: Review of Green River/Hams Fork draft EIS

As requested we have reviewed the draft EIS for the GRHF. It should be noted that several of our comments are repetitious of our comments on the cumulative analysis provided in March.

General Comment: It is evident that the determination of the significance of potential impacts is accomplished by comparing various alternatives to the projected future without conditions. For this reason it is imperative that the projected future conditions truly portray those conditions which can reasonably be expected to occur without the increased coal production which would be provided by project alternatives.

As example, page 14 states: "Under the No Action Alternative, a population growth of 68% is expected to occur in the impacted area between 1978 and 1995 as a result of mining and recreational developments already underway or planned."

Our questions regarding this 68% growth are:

1) What mining conditions and/or recreational developments are planned?

2) Is the increased production from these mining activities recognized in the coal production estimates?

A realistic and defendable baseline is essential for comparing all environmental impacts.

We therefore request that the mining projects, recreational developments, etc., included in baseline projections be identified and described. Such clarification would undoubtedly eliminate many specific comments and future questions in the forthcoming EIS.

Attachment

Part 1

Specific Comments:

Page 13, Paragraph 7 - The percent sewage effluent is superfluous without a description of the quality of such effluent. It would be helpful to know the population base for which these estimates are projected.

Page 16, Column 2, Paragraph 6 - As indicated by preceeding comments, the quality of the effluent is of prime consideration. The biological impacts should be controlled by strict adherence to NPDES requirements. It should be noted that any aspects of this alternative which would prevent compliance with meeting effluent standards could render the alternative inviable due to public health and environmental considerations.

Page 23, Paragraph 1 - Subtracting 19,842 acres (Big Game Winter Range loss due to Wildlife action) from 103,938 acres (Big Game Winter Range cumulative loss) leaves 84,096 acres of Big Game Winter Range which are projected to be lost from unexplained reasons.

It is noted that this represents a reduction from the 121,323 acres that was projected to be lost without action in the cumulative analysis. The "without action losses" should be the same. Such a variation, in conjunction with what appear to be exact figures raise the question: "What are these large without action losses based upon?" The source of such losses should be identified if they are to be used to determine significance of the proposed action.

Page 23, Paragraph 2, Wildlife States: - "Losses to habitats and animals in Wyoming for all alternatives would be minor, in that significant animal losses would occur, but numbers would still maintain current stable or increasing regional trend over the long term. The development of the five Wyoming tracts (as would occur in all alternatives) would, however, result in local declines in antelope and deer herds (OAU's) and sage grouse."

Quantitative data (previously provided) on the losses to habitat and animals in Wyoming is available from the Wyoming Game and Fish Commission and should be presented in the EIS. Wyoming Game and Fish Commission data indicates the following:

On the Red Rim China Butte areas alone:

a) 2500 antelope will be impacted
b) on a long term basis the antelope carrying capacity will be reduced by 1600 animals (27% of the area population)
c) 450 mule deer will be impacted
d) 75% or 338 mule deer would be lost (this figure represents 5% of the total Baggs herd)
e) loss of critical habitats will result in a loss of 24,003,200 sage grouse.

Page 23, Paragraph 3, Wildlife - The loss of 1659 acres of riparian habitat for any reason is highly significant and deserves further discussion. Given the BLM policies for preserving these habitats in conjunction with

Page 2

Executive Orders 11988 and 11990, we must assume that the ownership as well as the actions responsible for the projected baseline loss are held and promoted entirely by private entities. In the interest of preserving these valuable habitats the FWS would appreciate more information on these areas.

Page 23, Last Paragraph, Wildlife states: - "The major portion of the impacts is attributable to projected growth and development without implementation of this alternative."

Page 26, Paragraph 1 - As discussed under "General Comments" this growth and development needs definition.

The discussion of big game winter range losses assumes a baseline (no action) loss of 79,111 acres. Refer to comment on page 23, last paragraph.

Page 26, Paragraph 2 - We do not believe that the wildlife losses in Wyoming are "minor." While only a localized area is to be impacted, the analysis of the entire SW 1/4 of Wyoming is misleading by diluting the true impact. Big Game analysis by herd units would more adequately describe the loss. Refer to comments on page 23, paragraph 2.

Page 26, Paragraph 3 - The loss of 1701 acres of riparian habitat is very significant. Refer to comment on page 23, paragraph 3.

Page 70, T&E Plants - The request for Formal Consultation on Threatened and Endangered Species, dated April 9, 1980 (rather than February 12, 1980) is in process. A biological opinion is forthcoming.

Pages 104 and 105 - Tables 31 and 32 indicate that approximately 42% of the tracts identified (both Colorado and Wyoming) have surface material which is deemed unsuitable for reclamation.

For reference, Page 197 (last paragraph, column 1) states: "OSM regulations require that vegetation be reestablished and land mass be returned to a contour that blends with the surrounding topography."

It appears that existing OSM regulations may in fact preclude mining of tracts presently proposed for leasing. If this is a possibility, the implications upon the proposed action deserves prime consideration in the final EIS.

Page 190, Paragraph 3 - Animal Losses states: "An increase in population of 125 percent in Colorado by 1987 without additional Federal coal leasing would have a significant adverse effect upon wildlife."

If the 125 percent as stated is a population projection it is in conflict with other figures used in the text. Clarification in the final EIS would be helpful.

Page 191, Paragraph 1 - See comment on page 70.

Page 3

Page 192, Column 2 (5) states: - "The lessee would not disturb the area within one-half mile of the center of sage grouse strutting/nesting complexes, except on areas that would be mined."

Areas that would be mined are the main source of impact. These impacts should be reduced or avoided by utilization of the "unsuitability criteria." As such this should be "committed mitigation" rather than "uncommitted mitigation."

Page 196, Paragraph 2 states: - "Two major factors dictate quality for hunting: economics and politics."

The FWS believes that the major factors dictating quality for hunting are:

1) Quantity and quality of available habitat and

2) The number of permits available.

Both of these factors will be adversely affected by the proposed action. Cost related information relevant to these impacts is available on request from the State agencies and should be included in the EIS.

Page 253, Table 4-21, "Summary of Adverse Impacts" shows - no change in any of the impacts to the 11 elements presently evaluated regardless of the alternative.

If this table is correct, there is a gross insensitivity in the evaluation procedure. Such insensitivity could be explained in part by the utilization of a 6,973,621 acres study area to dilute the impacts which result from leasing 108,000 acres (max. alt.) of coal.

Part 2

Summary

It is indicated that more wildlife inventory data or futher studies are needed on the following tracts for unsuitability criteria purposes:

Tract	Criterion #
China Butte	11,12,13,14,15
Medicine Bow	9,11,12,13,14,15
Red Rim	11,12,13,14,15
Rosebud	9,11,12,13,14,15
Seminoe II	9,11,12,13,14,15
Bell Rock	11,12,13

Page 4

Tract	Criterion #
Empire	11,12,13
Grassy Creek	11,12,13,14
Danforth Hills #1	11,12,13
Danforth Hills #3	None indicated
Hayden Gulch	13
Lay	13,15
Danforth Hills #2	11,12,13,15
Pinnacle	None indicated
Iles Mountain	None indicated
Williams Fork Mountains	None indicated

As indicated by the above there is considerable information still needed to complete the application of the unsuitability criteria as described on page 421.

It is our hope that the ongoing collection of information will allow only suitable areas to be leased.

The final EIS should discuss the completeness of the unsuitability criteria application. In addition, areas previously deemed "unsuitable for mining" should be deleted from the legal descriptions given for tract delineation purposes. (Example: Iles Mt. - pg. 361 - T5N, R92W, Sec. 3 is unsuitable).

Thank you for the opportunity to comment on the draft EIS. If we can provide further information please feel free to contact Mr. Bob Jacobsen at FTS 588-5637 or Mr. Ronel Finley at FTS 234-5897.

Robert A. Shields

DEPARTMENT OF HEALTH AND HUMAN SERVICES
PUBLIC HEALTH SERVICE
CENTER FOR OISEASE CONTROL
ATLANTA, GEORGIA 30333

July 3, 1980

EIS Team Leeder
Bureeu of Land Management
Creig District Office
P.O. Box 248
Creig, Coloredo 81625

Deer Sir:

We heve reviewed the Dreft Environmentel Impact Stetement (EIS) for Green River-Hams Fork, Regional Coel, Northwest Colorado end Southcentrel Wyoming. We ere responding on behalf of the Public Health Service and heve the following comments to offer for your considsretion.

We realize thet in view of the ovsrriding energy demands eccelereted coal mining and production is e necessary tesk on behalf of the United Stetes. However, we still hold concerns for the human environment end human health thet is impected by the sitings of the mining ectivities. Our comments will eddress Psrt I of the general proposed mining ectivities end not the 13 site specific locstions.

The document provides good coverege of the environment end environmental consequences. However, the mitigetion offsred for advsrse effects wes steted in an uncommitted feshion. What measures will be taken to buffer some of the unavoidsble effects these mining activitiss will have on small towns? In perticuler, what is the protrectsd impect on housing, medical emergency fecilities, and schools?

On pege 177 it is steted the maximum development of these projects will impect or destroy 8 wells end 1 spring in Wyoming and 6 wells and 8 springs in Colorado. If individuals ere currently dependent on these wells or springs for drinking or irrigetion purposes what schemes will be developed in order thet these persons will heve eccess to suiteble alternative sources?

On page 181 we noted thet any coal development thet requires e wetsr source would bs dependent on existing permitted uses thet ere not being fully utilized or the trensfer of current water rights from other uses such es irrigetion. Will this be possible or feasible in view of the previously steted fects thet water is in short supply? Will any of the proposed sites conetruct e coal preperetion plant?

Pege 2 - EIS Team Lesder

Thank you for the opportunity of reviewing this document. We would appreciate receiving e copy of the final EIS when it is issued.

Sincersly yours,

Frank S. Lisella

Frank S. Lisella, Ph.D.
Chief, Environmental Affeirs Group
Environmental Health Services Division
Bureau of Stete Services

28

WILD HORSE ORGANIZED ASSISTANCE
EASTERN STATES REPRESENTATIVE
BOX 26
CANTERBURY, NEW HAMPSHIRE 03224

July 2, 1980

Dan Martin, Team Leader
Bureau of Land Management
Craig District Office
P.O. Box 248
Craig, Colorado 81625

Subject: Green River-Hams Fork Draft EIS, Coal

The Green River-Hams Fork Draft EIS indicates the existance of 23 wild horses in the China Butte, Wyoming tract. It is curious to note that only 23 horses are said to inhabit the entire area encompassed by the EIS. Wild horses are not mentioned in most of the other 15 tracts. In the Iles Mountain, Colorado tract breakdown, wild life is not mentioned at all. Is this an oversight? Are there now, or have there been in the recent past, wild horse populations in the areas referred to in this EIS?

WHOA vehemently opposes any attempt to remove any of the 23 horses in the China Butte, Wyoming tract. The Overland Unit Management Framework Plan devised by BLM, ranchers and wildlife people, is a decision obviously biased against the horses, therefore it is not managerially sound. Neither is it in line with the law. The Wild Free-Roaming Horse and Burro Act as amended by the Public Rangelands Improvement Act of 1978 under Policy states: Wild free-roaming horses and burros where found on public lands shall be considered comparably with other resource values in the development of resource management plans under the Bureau's planning system including allocation of appropriate forage." (The emphasis is added.) The Green River-Hams Fork Draft EIS authors are accepting the Overland Unit MFP decision in regard to the wild horses, it appears, as a matter of utmost convenience. The MFP alternatives, if any, and WHOA assumes there are alternatives, are ignored. It is far easier to say as in the China Butte, Wyoming Site-Specific Matrice (p. 12, Vol. II) "No anticipated impacts if horses are removed as planned in the Overland MFP," than to deal with the situation in accordance with the law.

There are at least 22 operating mines in Wyoming within a 50 mile radius of China Butte and many more if operating mines in Colorado are included. The EIS fails to provides alternative action if the 23 horses remain where they are, as they should. .0015 horses per square mile is hardly overpopulation. WHOA would appreciate a copy of the Overland Unit MFP. It appears to be impossible to find any justification for removing the only wild horses in that area. It would be interesting to read the attempt at justification in the Overland Unit MFP.

The Green River-Hams Fork EIS, by ignoring the possibility that the wild horses remain, makes no mention of the effect of present mining operations on the horse herd. It is obvious that the mining operations have encroached on the horses habitat. How have the horses reacted? Generally the horses will expand their habitat when faced with such encroachment.

Mining operations could be beneficial to the horses in its long term effects, another variable not explored by the EIS. Water holes could be expanded or new ones provided. Reseeding of reclaimed land would increase forage availability. It is not necessary to remove the 23 horses in the China Butte tract even if an alternaive other than No Action is decided upon. A little extra care must be taken to see that the horses have access to forage and water, both during and after the mining activity.

WHOA recommends that the China Butte tract be re-evaluated before the final EIS is issued and that wild horse populations, or the absence of, in other tract areas be rechecked and verified as accurate.

WHOA recommends the No Action alternative for the entire area as the negative effects on wildlife, soils, salinity of receiving waters, acquifiers and springs, many of which are permanent effects, outweigh the positive effects of increased coal production. Many threatened or endangered species inhabit the tract areas and once lost those species are irretrievable. If their habitat is not destroyed, the increased activity in the area would drive them off.

If an alternative other than No Action is chosen, WHOA most definitely recommends complete restoration of the land, including riparian areas. A great deal more research should be done before any alternative other than No Action is implemented.

Thank you for the opportunity to comment on the Green River-Hams Fork Draft EIS. I am fully authorized to speak for Wild Horse Organized Assistance. I would appreciate a copy of the final EIS when it becomes available. Please put me on your mailing list.

Sincerely,

Kathryn M. Cushman

Kathryn M. Cushman

KMC/kmc

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SUPERCEDED BY SUBSEQUENT LETTER

We have expressed these and other concerns in previous meetings with the Department of the Interior, Bureau of Land Management and Geological Survey personnel.

We believe that during the preparation of the final Green River - Hams Fork Environmental Statement that the Departments of the Interior and Energy should maintain a level of contact and cooperation that would insure achieving a level of leasing at the Preferred Alternative.

Sincerely,

Robert H. Lawton

Robert H. Lawton
Director
Leasing Policy Development
Resource Applications

30

Natural Resources Defense Council, Inc.

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July 3, 1980

Dan Martin, Team Leader
Bureau of Land Management
Craig District Office
Post Office Box 248
Craig, Colorado 81625

RE: Green River-Hams Fork Regional
Coal Environmental Impact Statement

Dear Mr. Martin:

These comments on the above captioned draft environmental impact statement (DES) are submitted on behalf of the Natural Resources Defense Council, Inc. (NRDC). NRDC is a non-profit environmental membership organization with long-standing concerns about the environmental and other problems associated with the Department of the Interior's management of all publicly owned resources, including coal. Since its inception, NRDC has engaged in a variety of activities, including litigation and the submission of comments on proposed regulations and impact statements in order to ensure that environmental values are fully considered by the Department in its management of coal and other resources.

The above-captioned DES deals with the Department's first effort to implement the new federal coal leasing program adopted by Secretary in June, 1979. (p. 5.)[1/] The paramount goal of that program is to ensure that publicly owned coal is leased and developed in an environmentally responsible manner. See, e.g., Final Environmental Statement/Federal Coal Management Program, p. 2-63. While we fully support that goal, we warned in our comments on both the draft environmental

1/ Unless otherwise indicated all page references are to the DES.

impact statement on the federal coal management program and the regulations proposed to implement that program, that the Department's determination to include a "start-up" process in order to allow federal coal to be leased in 1980 threatened to undermine the merits of the program and its paramount objective. Unfortunately, the DES confirms our fears.

The DES, like the "start-up program" itself, has plainly been driven by the Department's determination to lease coal in 1980. Its treatment of key issues, including the need for coal from the Green River-Ham Forks area, the target setting process, the updating of applicable land use plans and the environmental impacts of proposed leasing, is wholly inadequate. Notwithstanding these deficiencies, it is clear that development of Federal coal in the DES area will produce severe, widespread and long-term environmental degradation. If and when the Department attempts to achieve the objectives of the coal program through the full implementation of its other requirements, it will be far too late for the environment and the inhabitants of the region.

The DES has been prepared for purposes of determining how much federal coal should be leased in the study region. As you may already know, NRDC's comments on the draft programmatic coal statement demonstrated that the Department's projections of need for new leasing both exaggerated that need and failed to justify major new leasing before 1985. Even assuming that the basic decision to increase coal production to meet "National energy demands" need not be reexamined, p. 8, and notwithstanding the difficulties inherent in estimating future coal requirements, p. 10, it is clear that the DES must address the need for leasing in this region. The DES asserts that there is, in fact, a need for leasing. (p. 5.) Like the programmatic EIS however, it fails to justify that need. Indeed, the DES makes absolutely no attempt to explain how the regional coal target was set. Instead, it merely refers

readers to other documents. (Id.) Given the central importance of this issue, this approach is plainly inadequate and conflicts directly with the fundamental objectives of the National Environmental Policy Act (NEPA).

This is particularly true, under the circumstances: nationally, 20,000 miners are out of work and supply far exceeds demand. See, e.g., "Constraints Inhibit Coal Boom," The New York Times, June 24, 1980, p. D1. As for as western coal is concerned, Assistant Secretary Martin has reportedly admitted the existence of one hundred million tons of excess capacity. Finally, there is a significant disparity between the annual rate of growth in electricity demand which the Department of Energy assumed would occur (4.8%) and that which actually is occuring (approximately 2% in 1979). Cf. "Federal Coal Leasing and 1985 and 1990 Regional Coal Production Forecasts," Leasing Policy Development Office, Department of Energy, p. 89 (June, 1978)(mid-range scenario) with DOE/EIA-0010 (79), Energy Data Report, "EIA Annual Report on Monthly Comparisons of Peak Load Demands and Energy for Load-1976-1979" (released for printing May 14, 1980) and DOE/EIA-0049 (79), Energy Data Report, "Preliminary Power Production, Fuel Consumption and Installed Capacity Data for 1979" (released for printing May 14, 1980). All of these factors suggest that the estimated target is far too high.

In addition, the DES itself raises questions about the extent of the alleged "need" for Green River-Ham Forks Federal coal. For example, it appears that the preferred alternative exceeds the most recent regional target set by the Secretary by 223.65 million tons of Federal in-place reserves and far exceeds the "forecasted 1987 shortfall." See pp. 5 and 21. Similarly, the statement reveals that the target has already been changed three times since the Secretary first "tentatively" selected a target in June, 1979. (p. 5.) The range has varied from 321 million tons to 520 million tons. Id.

These repeated and unexplained changes plainly suggest uncertainty about the need for this coal. Indeed, the DES reveals that the target may be changed yet again, prior to the final leasing decision. (p. 10.) Moreover, despite the fact the 26 preference right lease applications (PRLAs) involving 297.5 million tons of coal are pending in the study region, the Department has made no attempt to assess their production potential. (p. 10.) Finally, it appears that no assessment has been made of the production potential of any outstanding coal leases, except those for which mining plans have already been submitted. See, Table 2-2, p. 45. Absent such information, the DES fails to provide a rational basis for the proposed action.

The Federal Coal Leasing Amendments Act, § 3a(1), and the Federal coal program require that leasing decisions be based on comprehensive land use plans. Because of the Department's determination to lease coal in 1980, the proposed leasing relies on management framework plans (MFPs) developed pursuant to the "old" land use planning system utilized by the Bureau of Land Management (BLM), rather than plans developed pursuant to the agency's new system. The various environmental, data and other deficiencies of the old system, and the MFPs it produced, have been pointed out by many, both generally and specifically in terms of coal management. See, e.g., American Society for Planning Officials, Improving the Bureau of Land Management's Planning Process (1978); NRDC's comments on the draft programmatic coal statement. Although the new coal program permits reliance on MFPs in order to allow accelerated leasing, it requires that they be updated in recognition of their deficiencies. See Coal Management; Federally Owned Coal, Final Rulemaking, 44 Fed. Reg. 42584-42651 (July 19, 1979), p. 42589; §§ 3420.1-5(c) - (d) (hereinafter referred to as "Coal Regulations").

The DES eeesrte thet the MFPe were supplemantad, "[m]ultipla uee treds-offe were enelyzad, the prsfsrsnces of the potentielly effectad renchare end fermers wsre coneidered snd unsuitebility critaria were epplied" (p. 6.) It provides no information ragerding the manner in whioh thaea stsps were eccompliehed or their rssults, however. Moreover, it cleerly suggeste thst at lsest eome of the requirad steps have not been completed, thet othere msy hevs been improperly teken, and thet etill other importsnt feeturee of the new progrsm have bsen ignorsd ss ths rssult of the schedule edoptad for leasing in thie DES area.

For exampla, of the nine trecte in which surfsca owner consant must be scquired prior to lessing, consultation hes been completsd for only ons trect. Similsrly, the eite-specific matricss contsinsd in Volume II of the DES revesl that ths lands uneuitsbility critsris (LUC) heve not been fully applisd to any of the sixteen trscts involved in the propoeed lsssing, principally becsuse of lack of dsts needed for thsir applicstion. Thus, ten of the eixteen trscts hsve not been sdsquately studisd for threatened snd/or endangsred species and thirteen of them may ba encumbersd by slluvisl valley floore (AVFs).[2/] Moreover, it is clesr thst important dets regsrding reclamation is lacking for st least four of the tracte.[3/]

2/ Even aseuming thst the Office of Surfsce Mining'e fsilure to supply sn edequats definition of AVFe sccounte for the BLM's inebility to dstermins which trscts ars in fact sncumbersd, it is plain thet ths Department's insistsnce on accelsratsd leaeing is whet hss crested the problsm in the first plece.

3/ Some of these snd other deficisnciee could thsoreticelly bs remedied sfter leasss hsvs been issusd end mine plane prepared. In fact, it is extremely unliksly thst they will ba, given the expense that the mining companise involved will heva slready incurrad.

As indicated, the DES also suggests that the required updeting wee not properly eccompliehed. For exampla, the fact that fiftean of the eixtean tracte poessee eignificant wildlife valuee, including critical or essentiel hebitet for etete lieted epecies, criticel big game winter rangee end migretion routes, pleinly indicatee thet tha LUC desiqnad to protect wildlife wee not properly epplied. Similerly, the epperent feilura of the BLM to identify eny new tracte for lsaeing, ee oppoeed to tracte previouely identified undsr coel leeeing end lsnd uea plenning procseses the Depertment hee oeteneibly rejectad, not only indicatse that the allegad sveluetion of multiple uea treda-offe wee improperly conducted, but eleo illuetretse the fundsmentel inconsietency betwsen tha "start up program" end the overall coel program. As fer ae the Green Rivar-Hem Forke erea ie concerned, it eppeers thst the "ecrsene" thet wers suppossdly incorporsted in the program in ordsr to ensurs environmentsl protsction heve made no significant diffarsnce whstsoever.

This ie perticularly trus with reepect to the concept of "thrsehold dsvslopment lsvels." Coal Reguletions §§ 1601.0-5; 3420.23(f). This concept, which we supported in commsnting on the progrsm, is euppossd to ensure thst unscceptable environmentel and socio-economic impscte will not occur in ereee othsrwise accepteble for leasing. Given ths magnitude of ths development which is expected in the study region snd the prsdicted impacte, it ie clear that ths arse presents en optimum cees for the spplicetion of thie concspt. Unfortunetely, it sppeers to have been completaly ignored in the procese of updeting the applicabls MFPs.

The updating procses also seems to have ignored the BLM's responsibilities with reepect to arsse of critical environmentel concsrn (ACECs). These areas sre dsfined by ths Fsdsral Land Policy and Management Act (FLPMA) to be thoee

> where specisl manegsment sttention is requirsd (whsn euch sress are dsvsloped or ussd or where no development is rsquirsd) to protsct snd prevsnt irrepsrable damage to important . . . resources or other nsturel systems " 43 U.S.C. §§ 1701 et eeq., § 1702(a).

FLPMA requires the BLM to give "priority to the deeignstion end protection" of thses ereas in tha plenning and revision of lend uee plsns. Id. § 1712(c)(3). Thie requirament is raflscted in ths Coel Reguletions, § 3420.1-5 (c)(iii), ae well ee the Bureeu'e plsnning rsguletione. See Public Lande end Reeources; Planning, Programming end Budgeting/Finel Rulemeking, 44 Fed. Reg. 46386 (Aug. 7, 1979). ACECe must be identified end protectsd prior to leeeing of eny publicly owned lends. The drsft plsinly euggsste that all riperian sreae within the region may quslify ae ACECe (p. 23). Cf. BLM Manuel 6740, Wetland Riperian Area Protaction end Mansgemsnt, § .22B.

As indicatsd, wa slso believe thet the environmentel enslyeie conteined in ths DES ie inedaquste. In lerga part, this inedequacy stsms from serioue dsficiencies in the beealine dete which have been ussd to predict the impscts of ell elternatives, including no sction. Thus, for exampla, the Wyoming baeelins feile to include ons mina which ie currently opereting end one sntire town. In sddition, we understend that officiel documente prepared by Wyoming stete egencies indicete thet the production potentiel of proposed trecte in the Hanna Baein héve besn groesly underestimeted se well es that, without furthar federal leasing, the Besin will yield more coel then the DES projecte will be produced for the entira Wyoming portion of tha etudy eree, eeeuming, of courea, thet there is, in fact, e damand. Finelly, se discueead abova, tha etatament faile to considar production from any of tha PRLAs which ara pending in tha region, ae wall ee outatending undeveloped coel leeaae.

These end other dete problema prevent eny raaliatio eeeaeement of tha currant ragional eituation. Thay invalidata tha pradictad impaote of all altarnativas and, in addition,

ceet increeeed doubt on the sllegations of "nsed" for new coel leseing in the DES sres. Ths impact snalysis and conclueions ers furthsr compromissd by ths spproech tsksn in essseeing the effacts of the sltsrnetivse.

The DES does not seeese the impacts of each leaeing sltsrnetive on the exieting environment. Inetesd, it comperes the impacts of the leaeing alternativss on the exieting environment plus "expectad" development. Thie hypotheticel degredetion of the sxieting snvironment eccounte for the etstsment's overall conclusion -- thet the impecte of eny amount of naw leasing will ba insignificant when compered to whet will occur enywey. (p. 2.) Obviouely, thie epproach obecurss the environmentel impacts of new lssaing. Equelly obviouely, it is totally inappropriate.

Finelly, the DES treete specific topics inadequetsly. Reclsmation problsme ere minimized, deepite exieting informetion indiceting thet revsgstetion with nstive epecies ie likely to be impoeeible. The impecte upon reeourcae euch ee wildlife end eoils thet will rssult if revegatetion doae not succeed ere ignorad. The impecte on wildlife genarelly are treeted in superficiel deteil end undsreetimeted. Tha statement thet adverse impecte to wildlife will end with the life of e mina ie highly queetionabls, sinca eeeential habitet conditione for many speciee cannot be rscreated. Aleo suepect ere eeeertione that affected epeciae will be diepleced to edjecent arees, given the failure of the DES to demonetrate that euch erees ectuelly exist. Traneportation impacte heva elso been undereetimated, in pert ae tha reeult of the feilure to acknowledge tha conatruction of reilroed spurs.

In conoluaion, wa eubmit that tha accaleretad timetabla for laaaing haa pravented tha davelopment of a aound, environmentally responsible leasing program for tha Graan River-Hams Fork ragion, es well aa tha praperation of a uaaful draft impact etatament. Any benafit that might hava raaulted

from protective meesures thet were incorporetsd in the "stert-up program" hes been secrificed to ths schedule, es hss ths paramount gosl of ths ovsrell federsl progrsm. Ths DES feils to supply e retionel bssis for the proposed ection, or for the svsluetion of liksly impscts. Givsn the significence of the DES end the severe environmentsl end other impacts thet will result from unwise development, the lsasing schedule should be dsleyed, if not ebendoned, so thet the leesing process cen be properly implsmented end impacts cen be eccurstsly esssssed.

Thenk you in edvencs for your consideretion of these comments.

Sincerely,

Johanne H. Wald

Johanne H. Wald

JHW/jt
cc: Gary Wicks, Utah State BLM Director,
Chairman, Regional Coal Team

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Comments on the Green River - Hams Fork Regional Coal Environmental Impact Statement

The following comments will be broken down into the following categories: water, wildlife, wilderness, Schools, Railroads Agriculture and socioeconomic concerns.

Water

Water is the wests most important resource and who ever controls the water controls the land. The number one problem is storage of water. This is why more dams need to be built especially the Juniper-Cross project.

The increase of strip mining will contribute to erosion, salinity and pollution of water. I question the ability of reclamation to improve or even restore the aquifers. Even if this occurs the water may be unfit for human consumption and total recharge may take millions of years. I also question that only 14 wells and 9 springs will be severely impacted when even USGS maps do not show all the wells and springs. If these lands are mined during periods of droughts these and other springs maybe lost forever.

The most important issue concerning water and coal is not even mentioned and that is the use of "coal slurry pipelines" when projections are made that 30 plus trains a day are forecast I believe that in reality thatslurry pipelines will become reality either by economics or federal fiat. Colorado and Wyoming do not have the power or votes in congress to override this legislation. Depending on how the deep water well suits come out (Houston and Wedlog) slurry lines will probably use this water.

P-1

Wildlife

With the increase of mining, developments and recreation and loss of agricultural land the big game animals are forced more and more on to private agricultural lands in competition with cattle and sheep. This will increase the problems between the Division of Wildlife and ranchers. This is a no win situation for everyone involved.

I feel that your figures for car-deer accidents is far to low because deer hit by some cars are not reported and deaths caused by trains are not even considered.

Wilderness

The creation of more wilderness areas not only locks up valuable minerals resources but deteriorates the quality of water. Wilderness areas have forced big game animals onto private lands by increased use by back packers with dogs. This happened above Yampa, Colorado on the ranches below Stillwater Reservoir.

Latest US Fish and Wildlife Service research on migratory birds "The Migrations of Birds" states that in some instances development of wilderness disrupts life patterns of birds native to the area but also frightens migrating birds away.

Schools

The one issue that was not mentioned is the loss of school time in the Soroco School District in Oak Creek due to the noise levels caused by trains. The noise completely disrupts the classroom. I believe and you can check with Superintendent Bill Meek that an hour of class time is lost each week at the present levels.

P-2

Agriculture

Farming and ranching has been the backbone of these counties for over 80 years. I am not sure that anyone has a right to rape and pillage this land in the name of energy when technology could and has created 100 mile per gallon carburators, alcohol fuels and nuclear energy.

This land was carved out by tough loving individuals who knew God and nature and could feel the land cry out for help in time of need. Now men drive earth movers leaving behind a scared broken piece of land but in the end nature will get her revenge by floods, fires, earthquakes and famines. In this country you can not take and take and give nothing in return.

Further payment for damage to grazing lands or purchase of farm land doesn't repay a man for a life time of work or the loss of a way of life. Payment is made for actual damages and not the punitive damages which will affect future generations of people.

I find it ironic that prairie dogs, suckers and chubs are protected when they are of no benifit to mankind and agriculture isn't. Especially when 4 square miles of agriculture land is lost per day in the United States. This is over 1 million acres per year.

I believe that this impact statement is in error when they state that Steamboat Springs has a growing season of 28 days when in reality it is more like 60 days. You could check with Sam Haslem, the Routt County Extension Agent to verify this. I also wonder why the Colorado Farm Bureau isn't considered a major special interest group.

Railroads

I believe that something should be done regarding railroads.

P-3

Farmers and ranchers helped to pay ~~off~~ the bonds for the moffat Tunnel yet the railroads refuse to haul cattle or grain. I believe that the railroads should put up any needed crossing signals at their expense and not the counties. and that they reseed and rebuild the fences damaged or destroyed by the creation of new sidings.

I would like to see additional information on the possible extension of new markets in asia (Newsweek, June 30, 1980 p.46) if ~~they~~ these markets affect this area.

Socio economic

This topic is a mishmash of ideas, ideals and philosophies.

With the existing mines ~~opening~~ the opening up of additional lands still has the same effect it just adds and complicates the existing situation. Before this onslaught of humanity into mines and resort communities the old residents had certain standards and ideals. The natives could take progress in stride but not the ideals of communes, living together without marriage and the drug scene with this concept of ~~new~~ newcomers there were bound to be conflicts.

The influx created shortages of housing, services and over crowding of schools. The greatest need facing all the impacted communities is the need for new criminal-justice facilities to handle juvenile and adult crimes. These facilities should include rooms for mental, drug and phyco ~~logical~~ individuals.

I ~~perceive~~ perceive the first Conservative value on page 88 in a different light. Traditionally conservative agricultural communities depend on women to work in the fields and keep books. Further women don't compete on the same level with men they help. There is no contempt for women as janitors or ~~secretaries~~ Secretaries. Thus there are not as many negative attitudes toward women and their work.

Recreation is important and the reason there is depression and nothing to do is that todays people are not as innovative as they use to be. The creation of clubs, discussion groups, scouts, covered dish suppers and other activities would bring people closer together and help reduce mental and physcial stress.

In closing I would like to make additional comments. There has not been adequate time to evaluate this draft. [This why this isn't typed] Better information and resources are available. Further I believe that more meetings should be held in the impacted area. The smaller towns are impacted just as much and in different ways; wether it is loss of county services, poorer roads, increased rent and real estate prices, taxes increased to pay for new improvements and dust problems. I beleive that mass and rapid transit systems to work should and will be evaluated.

On page 100 paragraph one I would like to know when and where a hurricane struck this area.

Respectfully submitted,
Bill Perry
Box 238
Toponas Co 80479
Rancher
President of Routt County Farm Bur
Member Routt County Planning Commission

July 3, 1980

EIS Team Leader
Bureau of Land Management
P.O. Box 248, 455 Emerson St.
Craig, CO 81625

Dear EIS Team Leader,

Please find enclosed the data from the air quality stations in and around Craig, Colorado. The data is the same as what Utah International has provided annually to the Colorado Department of Health, Air Pollution Control Division, now known as the Air Quality Division.

Station P-1 is the Moffat County Courthouse. Station P-2 is located at the Colorado-Ute Yampa Project. Stations P-3 through P-7 are all located at Utah International's mine site.

I am certain if you contact Mr. Wayne Sowards, Assistant Mine Manager, Utah International, he will provide you with whatever data he has you might need.

Respectfully submitted,

Craig Weaver
P.O. Box 189
Hayden, CO 81639

CW/lkd

Enclosure: 1

PAGE 1

AVERAGE SUSPENDED PARTICULATE CONCENTRACTIONS (UGRAMS/M**3)
FROM STATIONS AROUND UTI'S TRAPPER MINE.
ATTN-WAYNE-SOWARDS

STN	YEAR	NO. OF SAMPLES	MINIMUM CONC	MAXIMUM CONC	ARITH. MEAN	GEOM. MEAN
P1	71	83	12.0	225.0	72.2	62.9
	72	90	17.0	202.0	71.3	63.1
	73	88	5.0	220.0	75.6	65.7
	74	72	18.0	234.0	96.5	83.7
	75	73	12.0	322.0	103.5	80.2
	76	79	23.0	441.0	134.6	118.4
	77	68	22.0	346.0	118.0	102.5
P2	73	18	9.0	90.0	18.6	17.5
	74	31	12.9	81.8	40.5	37.2
	75	42	6.4	436.1	60.1	35.0
	76	63	5.6	218.5	56.2	39.6
	77	144	3.5	132.8	45.1	35.7
P3	74	25	6.0	96.0	42.8	36.6
	75	34	6.2	157.1	30.3	24.6
	76	41	4.3	89.1	36.4	32.3
	77	50	14.3	123.3	44.8	39.0
	78	46	5.0	116.3	43.9	36.3
P4	74	17	1.1	440.0	78.6	42.1
	75	33	2.9	271.6	52.3	23.9
	76	14	21.7	150.3	65.6	55.0
	77	23	15.5	182.9	71.6	59.3
	78	39	1.1	81.5	30.8	26.4
P5	74	27	5.5	66.0	26.2	21.5
	75	34	3.5	215.9	24.0	14.5
	76	35	3.9	59.5	26.9	20.9
	77	48	8.4	231.3	38.5	31.3
	78	46	3.3	86.4	30.2	23.4
P6	74	19	9.0	130.0	47.9	34.3
	75	29	5.5	158.3	43.2	27.7
	76	36	8.4	570.0	82.7	41.6
	77	51	12.8	2139.5	174.2	101.1
	78	38	13.2	1655.0	207.7	100.2
P7	74	11	5.1	120.0	35.3	20.0
	75	27	3.7	67.8	21.1	16.3
	76	17	6.0	60.4	24.7	21.3
	77	25	8.1	141.0	37.9	30.3
	78	30	2.4	77.5	31.4	22.2

MOFFAT COUNTY PLANNING DEPARTMENT

MOFFAT COUNTY COURTHOUSE
PHONE 303 824-8221

221 W. VICTORY WAY
CRAIG, COLORADO 81625

July 7, 1980

EIS Team Leader
Bureau of Land Management
Craig District Office
P.O. Box 248 - 455 Emerson Street
Craig, Colorado 81625

Dear Sir:

The following are comments regarding the Draft Environmental Impact Statement for the Green River - Hams Fork coal leasing program:

Land ownerships within and adjacent to the proposed coal base tracts in Moffat County are primarily private and Federal, with Federally owned subsurface minerals. The draft summary (Page 4) may be in conflict with the court decision of Ventura County vs Gulf Oil Company in assuming that affected jurisdictions have sufficient authority to impose effective land use controls and policies. The draft also does not specifically address whether or not permit approval from local governments will be a part of the leasing program.

According to the draft, the land use sections for each of the leasing alternatives state that the existing planning and zoning tools should be utilized to direct urban expansion to less desirable lands, rather than land suitable for agricultural uses. However, because the Craig area is surrounded by land that is predominantly agriculture, any future urbanization will necessitate encroachment upon these lands.

The impact of the transition from agriculture to further mining operations will be increased significantly, rather than "very little" as expressed in the draft summary (Page 4).

At the present time the Planning Commissions for the City and County are revising and updating their Zoning Regulations in order to make zoning more compatible with each other.

The draft states, under "Environmental Consequences" (Pages 216 and 217), that the Denver & Rio Grande and the Union Pacific railroad lines are already nearing capacity, and that the upgrading and extension of existing lines are necessary in order to accomodate the coal leasing program, but the construction of a link tieing the U.P. and D&RGW was not mentioned as an alternative.

In linking these rail lines, another corridor, other than the Moffat Tunnel, would be established to aid in protecting national defense mobility and security, as well as improving coal transportation from the region and encouraging a competive atmosphere. The environmental description of transportation did not address the rail problems that the region is having in the shipment of goods, other than coal, (i.e. cannot get grain cars as needed because it is more profitable for the railroad to haul coal), nor does it address the real problems that existing coal companies are facing, such as high shipping rates and the fact that the coal companies must build their own railroad spurs.

Moffat County has recently conducted a survey to determine recreational needs for the present and the future. The results of the survey identify recreational activities and facilities that local residents prefer, would use, and would help support. The survey supports the draft, in that there is a definite need for indoor recreation facilities. (Copy of survey results enclosed.)

The question of where the funds for recreational development and maintenance will come from and how funding would be administered is not addressed in the draft. Because of continued growth there is a strain on local agencies in their ability to provide recreational resources. Various methods of resolving the recreational needs of Moffat County residents have been attempted locally. In 1976 an effort to form a Recreation District was defeated. At the present time the County is utilizing State and BOR funds for softball fields, picnic and playground areas and a concession building for Loudy-Simpson Park, a County facility, in an attempt to meet some of the recreational needs.

Because more easily identifiable needs, such as water, sewer and roads, are given a higher priority in funding matters, Moffat County cannot meet its many recreational needs and realize its full potential without much more outside funding from government agencies and private sources.

The Maybell community has an established infrastructure of facilities, consisting of a general store, motel, restaurant, a park, a church, volunteer fire and ambulance service, and State highway and County shop facilities.

There has been a moratorium on building permits issued to Maybell area residents as a result of a high ground water table infiltrating existing individual sewage disposal systems.

Moffat County would like to acknowledge that the Division of Local Governments has issued a Certificate of Need in the amount of $265,680 for a sewer treatment and collection system for the town of Maybell. The engineering firm of Dismuke & Dismuke has been contracted by the County for engineering services relating to the design and construction of the Maybell sewer system. It is anticipated that, when the sewer system is completed, the moratorium on building permits will be lifted.

It should be noted that the Danforth Hills Tract is approximately the same distance from Maybell as it is from Craig. Also, the Lay Tract is in close proximity to Maybell. Therefore, the Maybell area, as well as the Craig area, will be significantly impacted as a result of the proposed leasing program. (See attached map.)

July 7, 1980

EIS Team Leader
Draft EIS for Green River -
Hams Fork Coal Leasing Program

The City of Craig's staff, in their three year plan, has identified the following capital needs in order to accomodate anticipated growth:

$14,000,000	water
4,000,000	sewer
3,000,000	drainage
250,000	maintenance facility
250,000	pool and bathhouse renovation
8,000,000	special improvements, i.e. water, sewer, streets
500,000	refuse improvements, curb & gutter
200,000	park improvements
$30,200,000	total capital construction needs for the City of Craig

The City of Craig presently has a bonding capacity of $2,135,000. Therefore, in order to accomplish these necessary projects, the City will have to obtain aid from either Federal and State governments or private industry.

In addition, the City expects a four to six percent shortfall in operating revenues versus expenditures. If the City of Craig is going to meet the needs brought about by growth, it will need outside aid to meet its capital and operating requirements.

At this time, there is no real Federal program that gives efficient and timely aid to impacted communities. The lack of such a Federal program will have serious local and national consequences in the future.

Respectfully submitted,

James E. Pankonin

Jamee E. Pankonin P.E., Planning Director

Russell L. Sorenson

Russell L. Sorenson, Assistant Planner

Donald B. Cooper

Donald Cooper, City Administrator

cc: Moffat County Commissioners
Moffat County Planning Commission

BUREAU OF LAND MANAGEMENT

PUBLIC HEARING

on the

DRAFT ENVIRONMENTAL IMPACT STATEMENT
for the
GREEN RIVER-HAMS FORK COAL PRODUCTION REGION

Monday, June 23, 1980
1:00 p.m. and 7:30 p.m.

DENVER PUBLIC LIBRARY AUDITORIUM
1357 Broadway
Denver, Colorado

WILLIAM LUSCHER, Acting Hearing Chairman
Acting State Director
Bureau of Land Management

PAT GEEHAN
Office of Coal Leasing and Planning Coordination
Department of the Interior

STAN McKEE
Office of Wyoming State Director
Bureau of Land Management

ANN VANCE
Office of the Solicitor
Department of the Interior

CECIL ROBERTS
Office of Colorado State Director
Bureau of Land Management

DeWITT JOHN
Representative of Governor of Colorado

Prepared by DAILY COPY COURT REPORTERS, Denver, Colorado

to you.

A record of the hearings, including all timely written statements submitted, will be available for public inspection at the BLM, Room 700, Colorado State Bank Building, 1600 Broadway, Denver, Colorado, 80202.

If you wish to obtain a copy of the transcript for any or all of these hearings, you should make arrangements with the court reporter, either before or immediately following this hearing. I would like to request that each speaker speak their name and whom they are representing before beginning their testimony.

So far today, we only have one person who is registered to make a formal presentation. I'm not sure whether she has arrived yet.

You're here?

MS. HAUG: Catherine Haug.

MR. LUSCHER: Haug? If you will please come forward.

MS. HAUG: I didn't expect to be so honored as to be the only speaker. If anybody cannot hear me, they should maybe move forward to the front. I don't normally speak very loudly.

My name is Catherine Haug. I represent the National Wildlife Federation with four and a half million members. We are the largest conservation organization in America. I also represent Colorado Wildlife Federation. However, I'm not speaking for them today.

We have two principal concerns regarding the leasing project. The first is that the unreasonable degradation of wildlife habitat be avoided. And the second is that the needless sacrifice of valuable farmland also be avoided.

Our comments can be divided between those involving legal issues and those involving environmental issues. They address general questions or concerns which will be supplemented at a later date in written form.

In the legal context, we do not believe that the Federal Coal Management Program -- purposes of that plan are being carried out by the leasing of Green River-Hams Forks.

Specifically, one of those purposes is to establish procedures whereby land use planning and environmental assessment processes are involved in the leasing system. Another is to provide a means to establish a more desirable pattern of coal development. The process that has occurred so far in the Green River-Hams Fork leasing region has not furthered either of those purposes significantly.

The following are specific criterion of some previous steps in the leasing process. The first example of an action which goes against the purpose of establishing a more desirable pattern of coal development is the decision not to consider the preference right lease agreements in the setting of the lease target. This mission throws into question the entire targeting process. Further questions arise as a result of the

data relied on in reaching that target, as we believe this data may ignore recent market changes and recent drops in electricity demand growth rate. There also seems to have been a great deal of doubt within the Department of Interior as to the appropriate target amount, as evidenced by several rather extreme changes in total goal within the last year. In light of the fact that the target obviously can be changed, we believe it should be reassessed considering the above-mentioned factors.

We also feel the accelerated schedule for leasing has created the necessity for shortcuts in application of the Federal Coal Management Plan. We believe this office should be changed and the schedule extended to allow the full environmental assessment and planned development to occur that the program was designed for. One of the principal elements of the Federal Coal Management Plan is comprehensive land use planning, which is to precede any leasing. As new land use plans have not been developed, BLM, in our understanding, has been forced to rely on older Mangement Framework Plans. Several requirements are laid out in the Federal Coal Management Plan regulations that a land use plan must meet in order to qualify as a basis for leasing. We are not satisfied that all these have been met, particularly that critical environmental areas have been identified or that relevant data commensurate with likely levels and impacts of the leasing project are reflected in the management framework plannings.

Both of these requirements are particularly important in an area with many critical wildlife habitats such as occur in the Green River-Hams Fork region. If even some of the great impacts which the Draft Environmental Impact Statement has described as occurring are likely to occur in the near future, the data contained in the management framework plans is more likely to be out of date and in need of supplementation.

Volume I of the DEIS refers to supplements to the data in Volume II, but does not make clear what the data is or how extensive it is. One indication that nothing has changed is that most, if not all, of the plaques were previously designated under the EMAR System.

These are just some of the problems we see in using the Management Framework Plan without extensive reanalysis of the region. If these plans have been updated sufficiently, that should be made clear in the final Environmental Impact Statement by inclusion or by reference to the new data.

An important step in the land use planning process is the application of Land Unsuitability Criteria, designed to be a screening step to occur before any leasing has begun. We are not satisfied that these have been conscientiously applied as described in Volume II of the DEIS.

For example, Criterion No. 10 has apparently not been applied in Colorado. That criterion requires designation as unsuitable all land containing habitat determined to be critical

or essential for state listed threatened or endangered species.

Neither was Criterion No. 19, concerning alluvial valley floor, which have a high possibility of existing in at least 13 tracts. Postponing application of this criterion to the mine plan review stage, in our opinion, makes it less likely that land will be designated unsuitable if alluvial valley floors are found, and we fear some of the lands will be sacrificed.

One final process in land use planning that was apparently ignored was the establishment of threshhold development levels. Again, considering the severe impacts supposedly currently developing in the region, we see use of threshhold levels as essential to prevent this project from becoming the straw that broke the camel's back.

Another major area of legal concern is the adequacy of the DEIS. Our primary criticism is application of baselines used to predict impacts in Colorado.. The Draft Environmental Impact Statement in its description of the existing situation, the no-action alternative, predicts very serious impacts on all areas of analysis in the region, a result of other energy related development.

It is our understanding that these predictions are based on the Northwest Colorado Coal Regional EIS of 1976 and its supplement, which predicted coal production in 1987 to be twice as high as BLM is now predicting.

Apparently the impacts this higher production rate would have resulted in were never altered before serving as the baseline for this DEIS. This approach apparently is designed to support an underlying premise of the DEIS -- that impacts are so bad already that the addition of the Federal coal leases won't make much difference. Even if these predicted impacts could be supported, we believe that the results of this program should be viewed in terms of the cumulative impacts. If so many serious detrimental effects are already occurring in the region, we need to carefully analyze adding more rather than assuming that the situation is already so bad that we can't make it work.

On the other hand, several sources of energy development in the region were not considered in analyzing cumulative impacts. One striking example is the refusal to consider preference rights leasing agreements at all. The result of all this is total confusion as to why the regional situation actually which might lead to the conclusion that the analyses in the DEIS may be completely involved. This must be rectified before a DEIS can be issued.

We also feel that the site specific evaluations contained in Volume II are not sufficient to replace the requirement of site specific environmental impact statements and that that must also be met.

Several other areas received inadequate treatment

in the draft statement. Wildlife was analyzed within too large a study area; the issue of reclamation was not considered; its effect on wildlife; bioassessment of threatened and endangered species was not complete for the State of Colorado and should be in the file. The final environmental impact statement did not discuss construction impacts or the possibility of increased development along the new railroad spurs and impacts of that development.

Our environmental concerns I've already mentioned briefly. One is the possible loss of the alluvial valley floor. The second is that too many critical wildlife habitats would be disturbed, particularly big game critical winter ranges and fawning areas. And our third concern is the issue of reclamation. All the tracts have difficult reclamation problems, some of which are very serious potential impacts of failure to reclaim not analyzed.

In summary, we do not feel the process of leasing in Green River-Hams Fork region has served the Federal Coal Management Program's purposes of sound coal development and careful environmental analysis. Nor do we believe the Draft Environmental Impact Statement has accurately or sufficiently summarized the environmental impacts that will result from the leases.

We believe that federal coal leasing may set the pattern for development in these regions as well as for the

procedure in later leasing processes. For these reasons the current leasing must be carefully analyzed and supplemented to insure sounder development in the future.

As I already stated, we will submit written comments before July 8th.

MR. LUSCHER: Do any of the panel members have any questions they would like to ask?

MR. JOHN: I'd like to ask one, if I could. I think some of your points regarding the baselining is well recognized. One question I wanted to ask was about the question of comprehensive land use planning and the BLM is using the old MFP. Are you saying it would be inappropriate to have any lease of coal without doing new land use planning under the new regulations, or are you criticizing all MFPs or just these particular ones?

MS. HAUG: I think the point I was trying to make was that if those plans are going to be used, and it appears that they will be used in light of the schedule, that they should be updated very carefully, particularly in light of what's happening in the region or what has supposedly happened in the region already. In other words, our position right now is not all management plans need to be thrown out right at the moment, no.

MR. LUSCHER: Thank you. Is there anyone in the audience here in attendance that would like to make a

presentation at this time?

(No response.)

MR. LUSCHER: What we'll do is we'll recess for 15 minutes. If there are any latecomers that will be coming in this afternoon, then we'll reopen the hearing again and see if there's anyone that would like to make a presentation at that time or if any of you people want to reconsider right then. We'll recess right now until about a quarter to two.

(Whereupon, a short recess was taken.)

MR. LUSCHER: I'd like now to reopen this hearing again this afternoon. Are there any people in the audience at this time that would like to make a statement before the hearing panel?

(No response.)

MR. LUSCHER: If there aren't any people who would like to make a statement, I will adjourn the hearing for this afternoon. And we will reassemble this evening at 7:30 p.m.

(Whereupon, the hearing was recessed at 1:45 p.m. to be reconvened at 7:30 the same day.)

(Whereupon, proceedings were had beginning at 7:30 p.m., June 23, 1980, in the Auditorium of the Denver Public Library, 1357 Broadway, Denver, Colorado, as follows.)

BUREAU OF LAND MANAGEMENT

PUBLIC HEARING

on the

DRAFT ENVIRONMENTAL IMPACT STATEMENT
for the
GREEN RIVER-HAMS FORK COAL PRODUCTION REGION

Tuesday, June 24, 1980
7:30 p.m.

MOFFAT COUNTY COURTHOUSE
West Victory Way
Craig, Colorado

JERRY MAGNUSON, Acting Hearing Chairman
Regional Coal Team
Green River-Hams Fork Coal Production Region

PAT GEEHAN
Office of Coal Leasing and Planning Coordination
Department of the Interior

CECIL ROBERTS
Office of Colorado State Director
Bureau of Land Management

DeWITT JOHN
Representative of Governor of Colorado

ANN VANCE
Office of the Solicitor
Department of the Interior

JOE PATTI
Office of Wyoming State Director
Bureau of Land Management

Prepared by DAILY COPY COURT REPORTERS, Denver, Colorado

(The following statement was submitted to the court reporter in handwritten form by Mr. R. F. Riordan.)

June 23, 1980.

Comment on Draft E.I.S.

Green River-Hams Fork region.

We believe that of the five leasing alternates considered in the draft, the maximum alternate should be offered for lease. This alternate is similar to the expressed, preferred alternate as identified in the DEIS in that five (5) tracts in Wyoming are considered; but differs in that eleven (11) rather than eight (8) are considered for Colorado.

Since the new production tonnage potential difference between the eight and eleven format is only 3.20 million TPY, the maximum alternate should be considered.

R. F. Riordan

U. S. Steel.

540 Arapeen Drive

Salt Lake City, Utah 84108.

I am Louise Miller, Bags Route No. 74, Craig, Colorado.

I am so tired of the waste and the inefficiency that apparently goes into these reports. I read specifically in this all the tables pertaining to Round Bottom, and they really couldn't say whether there was this bird or not. They made a remark about that bird, but really they didn't have any data. It goes on that way about various animals and forage and everything else.

If they're not going to learn something about them, why waste the time not learning, or why even waste the time to put it in the book?

My dislike goes back much farther when all this coal stuff started. They had maps that were absolutely inaccurate. They showed pipelines going where pipelines didn't go; roads going where roads didn't go; sagebrush land where there is irrigated, agricultural land; forests where there is sagebrush.

In the historical piece that came out -- I'm talking now about those nice little orange books that came out two or three years ago -- why anybody wasted money paying any man to write that history on northwestern Colorado is beyond me. I think it's a crime. I think it's a waste of taxpayers' money. I do not approve of this inefficiency.

MR. MAGNUSON: Mrs. Miller, do you think there are any aspects of the Federal Coal Program that deserve study?

LOUISE MILLER: There may be, but if we're going to

study them, really study them and get our facts right and let'e present them properly. It don't take this much ehelf apace to present something that, really, half of it doesn't say anything.

MR. MAGNUSON: Do you have any other queatione? Thank you very much.

LOUISE MILLER: Thank you.

MR. MAGNUSON: Are there any othera present that wish to present testimony this evening?

(No reaponse from audience.)

Would you note for the record that there were no others indicating a desire to testify.

It is 7:35. The hearing is closed at thia point.

We appreciate your interest and your participation in the Federal Coal Management Program. Thank you very much.

MR. JOHN: Maybe there would be people here who would like to ask questiona that they could aak the panel afterwarda.

MR. MAGNUSON: Just two people spoke. If anyone haa any questions, we'll do our best to answer any questiona you have. If we can't answer them this evening, we'll get the information for you.

(No response from audience.)

Thank you very much.

(The hearing waa adjourned at 7:58 p.m.)

---oooOooo---

35

UNIVERSITY OF COLORADO
College of Arts and Sciences
BOULDER, COLORADO 80309

Department of Integrated Studies
Ketchum 128

5 July 1980

M r. Dan Martin, EIS Team Leader
Bureau of Land Management--Craig District
Box 248
CRAIG, Colorado 81625

Dear Mr. Martin:

I have read with intereet parte of your draft of the Green River /Hams Fork Regional Coal Environmental Impact Statement. In particular, I have perused those portions dealing with vegetation and with non-game wildlife, eubjects with which I have some familiarity in the area of etudy.

It is regrettsble that no field work wss done on non-game wildlife. I suspect that non-game birds and mammals are at least as sensitive indicstore of environmental quality as are "key wildlife species." In the absence of field work, however, you have used the best svailsble eummary of the literature. The so-called "latilong" studies of the Colorado Division of Wildlife are based on thorough survey of the primary literature and--within the limits imposed by their format--are quite ueeful documents.

Neverthelese, I think that the draft EIS does not do the lstilong studies full juetics. For example, the only attempt to quantify the widlife resource was the list (p. 72) of numbers of species in esch vertebrate class likely to be present in the study area. I think that an actual checklist of these species would be useful to the reader of the FinalEIS. The checklist could be derived from the latilong etudies with only the qualifier that the lists pertain to Wyoming portione of the study area as well as to Colorado.

The lists could then be annotated with ecological distribution, breeding statue, etc.This is a useful exercise, because it will force the reader to take an ecosystem view of the separate study sreas. This will serve to re-emphaeize your frequent contention that impacts of proposed activities are site-specific and evaluation of alternstives must, accordingly, be site-specific also. More importantly, ti will allow those writing the EIS to improve greatly the quality of summary statements (like Table 4-15, for example, and also the site-specific matricies.

Thanks for the opportunity to comment.

Sincerely,

David M. Armstrong

David M. Armstrong
Aseociate Professor--Natural Science
Muaeum Associate Curator--Higher Vertebrates

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energy fuels corporation

executive offices • suite 900 • three park central • 1515 arapahoe • denver, colorado 80202 • (303) 623-8317

July 8, 1980

EIS Team Leader
Bureau of Land Management
Craig District Office
P.O. Box 248
455 Emerson Street
Craig, CO 81625

Re: Green River - Hams Fork Draft
Environmental Impact Statement ("DEIS")

Gentlemen:

The following comment is submitted by Energy Fuels Corporation ("Energy Fuels") with respect to the DEIS prepared for the Green River - Hams Fork Coal Production Region of Colorado and Wyoming.

Pursuant to the call for expressions of interest published in 44 Fed. Reg. 62602, et seq., as amended in 44 Fed. Reg. 65197, et seq., Energy Fuels expressed interest in two tracts. See letter deted August 23, 1979 to Mr. Dale R. Andrus, Colorado State Director of the Bureau of Land Management ("BLM"). On November 19, 1979, Energy Fuels supplemented its expression to include the Wolf Creek coal reserve both within end without the boundaries of Federel Coal Lease C-22644. Of the three tracts identified by Energy Fuels, only the Pinnecle tract in Routt County, Colorado, wes selected for inclusion in the ranking process.

The Pinnacle tract is the smallest of the fourteen trects with an estimeted .9 million tons of federal recovereble reserves. Since it would be e continuetion of existing mining operations, assuming Energy Fuels were the successful bidder at a sale, production from the tract would not count egeinst the leesing target of 520 million tons per year set by the Secretary of the Interior for the Green River - Hams Fork Coel Production Region.

There has been speculetion during the Regional Tract Ranking process pursuant to 43 C.F.R. 3420.4-4 that the

existence of Sharptail Grouse in ths NW¼ of the tract was of such significant importance that the Pinnaole tract ehould not be included in the Coal Team's Preferred Alternative. A review of the DEIS has not shown subetantiated evidence that the Sharptail Grouse in this area will be aeverely affected as a result of coal production in the arsa.

Although a significant amount of scientific reeearch has teken place in recsnt yeare on the affects of disturbance of Sharpteil Grouse habitat, the conclusione reached by ths verious researchers are varied and conflicting. Because of the inconclusive nature of present Sharptail Grouee reeearch, it is impossible to state with confidsnce what impact mining may have on Sherptail Grouse's breeding and wintering activities in the Pinnacle tract area. In fact, there is some evidence to support a conclusion that mining may enhancs the Sharpteil Grouse habitat. In any event, the DEIS presents no substantiated evidence to establish that any activities in this aree will adversely affect the Sharptail Grouse in waye which cannot be mitigeted through rsasonable meane.

Unless definitive sciantific evidence ie presanted and made aveilable for public analyeis and scrutiny, the "anticipated effect of leasing/development", identified at Page 345 of the DEIS for Sharptail Grouse, should be changed from "high negative" to "not eccessible". Ths Pinnacle tract, or eny other tract, should not be excluded from leasing or given a significantly lower ranking on the basis of presumed nonmitigable impacts on Sharptail Grouse in the abeence of strong site-specific evidence. In this regard, Part I of the DEIS notes at Page 1 that the tracts were anelyzed individually in documents called Site Specific Analyses which have been summerized in the DEIS. However, the anelysis referred to was not available for review by the public. This analysis should be subject to public review and comment prior to issuance of the finel EIS. Energy Fuels hereby makes a formal request thet it be furnished with the eite specific analysis that relates to the Pinnacle tract. Finally, at Page 345 of the DEIS under the category "Present Situation", it ie stated that the level of Sharpteil Grouse activity on the Pinnacle tract is high (dancing ground). However, under comments on thie data, it is noted that no data ie available on the number of birds inhabiting the Pinnacle tract. The seeming contradiction should be explained in detail.

Excluding the Pinnacle tract without substantial evidence and implying that any impact on Sharptail Grouse is more important than the unemployment and energy consequences that may result from bypassing this coal is not consistent with the national policy of developing domestic energy reserves. In the absence of any conclusive evidence supporting the allegation of adverse impact on Sharptail Grouse in this area, Energy Fuels believes the Pinnacle tract should be included in the Preferred Alternative.

The DEIS on Page 45 of Part I estimates Energy Fuels' production will be four million (4,000,000) tons per year in 1987, 1990 and 1995. By letter dated October 26, 1979, in response to an invitation for comments set forth in 44 Fed. Reg. 5705, et seq., Energy Fuels informed Mr. Dan Martin, Regional Coal EIS Leader with the Craig BLM, that due to the limited strippable reserves remaining in the vicinity of these mines (Energy Mines 1, 2, 3) and based upon current production rates, Energy Fuels expects the majority of the strippable reserves to be depleted by 1987. Subsequent to this date, information developed by Energy Fuels disclosed the possibility of stripping approximately 16 million tons of Wolf Creek coal which lies below the company's currently leased Wedge Seam. The Wolf Creek Seam is not under lease from the federal government. For this reason, Energy Fuels supplemented its expression of interest to advise the Regional Coal team of its desire to have Wolf Creek coal considered for leasing. On the assumption that Wolf Creek reserves would eventually be leased, Energy Fuels, by letter dated January 21, 1980, informed Duane Johnson of the BLM that production levels could be projected to be 4,000,000 tons per year conditional upon our ability to obtain additional strippable coal reserves.

Page 45 of the DEIS indicates that Energy West, Inc. will meet a projected production of 4.5 million tons per year for 1987 and 5.7 million tons per year for 1990 and 1995. Currently, there is no production on the property operated by Energy West, Inc., and, under current economic conditions, there are no economically recoverable reserves on that property. Energy West is not planning to commence any mining operations on this property in the foreseeable future unless and until the coal market strengthens. In this regard, if coal is ever produced from the property, it is projected that annual production levels will be only 2.0 million tons per

year. In terms of energy planning, it is our recommendation that information regarding production from the property operated by Energy West, Inc. cannot be relied upon.

In conclusion, we find the DEIS contains a number of unwarranted assumptions which, in some instances, have led to questionable findings and conclusions. We respectfully request that the comments made herein be specifically considered and addressed in the final EIS and that the Pinnacle tract be included in the Preferred Alternative.

If you have any questions concerning our comments, please do not hesitate to contact the undersigned.

Respectfully submitted,

Gerald W. Grandey/SGR

Gerald W. Grandey
Vice President - Legal Affairs

GWG/SGR/jm

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July 4, 1980

Mr. Dan Martin
Eis Team Leader
Bureau of Land Management
Craig District Office
PO Box 248
455 Emerson Street
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Dear Dan:

Here it is the Fourth of July and I'm anxious to be outside like everyone else drinking beer, eating hotdogs, playing softball and shooting off bottle rockets. So these comments will be short and sweet.

Basically, I'd like you, in the Final, to reprint and answer the submission I made to the Regional Coal Team on December 9, 1979 - the one where I challenged the leasing targets as being inconsistent with the baseline scenario taken from the NW EIS and NW Supplement. You have a copy of it, I'm sure. Although those comments were based on the tract profiles, they are equally applicable to the Draft EIS.

I only have one other question to add:

Why didn't the Regional Coal Team answer these very serious concerns at the time they were originally submitted instead of waiting until now, a full seven months later after the appearance of the Draft EIS?

Thanks, Dan, and good luck on the rewrite.

Brad Klafehn

Brad Klafehn
3036 West 22nd Ave.
Denver, Colorado 80211

Mr. Gary Wicks
Director, Utah State BLM
University Club Building
136 South Temple
Salt Lake City, Utah 84111

Dear Gary:

I want to take this opportunity to share with you some of my thoughts and concerns regarding the Green River/Ham's Fork coal leasing proposal. I'm under no illusions that the Bureau will seriously alter its course to accommodate my concerns and those of other people with environmental perspectives. Indeed, it's been patently obvious to many of us who have watched the federal coal program develop that we were going to be railroaded in this whole process by our supposed protectors in DC - from Cecil Andrus on down to Guy Martin and Steve Guerles. The message came through loud and clear that Interior was going to lease coal regardless of its ability to demonstrate the need to do so, and that this was going to happen in time for Carter to be able to point to it to bolster (somehow) his re-election bid. Thus, after my colleagues were "persuaded" not to press the issue of the violation of the Hughes order, Interior proceeded with its leasing agenda full steam ahead, using the Green River/Ham's Fork region as the test case. This, I must admit, was a pretty smart move since of the three coal regions targeted in this first round of leasing, Green River/Ham's Fork is the one least likely to arouse strong opposition: it's an area that hasn't been deemed "sexy" by the national environmental groups (as Southwest Utah has been) and it's an area with NO organized local opposition (such as you find in Powder River). An easy mark to get the leasing program off on the right foot.

We might as well be up front about this - we don't have the political clout to stop or even significantly hinder Interior in its efforts to trash out the region. All we can do is to make threats about lawsuits - which may, in fact, materialize - and appeal to your good offices to make the process less of a travesty than it currently is. Personally, I was more optimistic about the latter course - you've been the one DC person in DOI who has given us a fair shake about coal in the past few years. But the November 14 meeting of the Regional Coal Team quickly disabused me of much of my optimism. I couldn't believe that you'd go along with the company line to such an extent, resolutely defending a schedule which is one of the most horrendous that BLM has ever formulated - and we've seen some real winners over the years. I couldn't help but think how you would react to such a schedule if you still worked for Montana instead of the feds. But despite my disillusionment, here goes another appeal to your good offices.

I know that the above has undoubtedly been embarrassingly personal - after all, we each have our roles, and "citizens" aren't supposed to talk to "bureaucrats" that way. But I also know that you take pride in your work and that you have a lot of feeling for the West. I just hope that some of that will be expressed in your response to these and other comments.

The comments I want to make fall into two main categories: tract delineation and analysis and the regional leasing target.

TRACT DELINEATION AND ANALYSIS

I have reviewed the tract profiles for the ten proposed Colorado tracts recently made available to me by Elaine Zielinski, who has been most helpful. On the basis of those profiles and other research I have done, I must state that:

-- all of the Coloredo tracts are environmentally unsound;
-- they were chosen with little or no regard for environmental considerations;
-- the tracts delineated were obviously chosen on the basis of industry interest alone
-- the tract profiles show a woeful lack of environmental data which must be acquired before the Bureau attempts to prepare the EISs or to rank the tracts
-- the tract profiles do not adequately discuss off-site impacts or related development, each of which is essential to the ranking and EIS writing processes.

Therefore, [redacted] request the Regional Coal Team to publically discuss [redacted] above allegations before ranking the tracts. I also request that new tracts be delineated for ranking which are chosen according to environmental criteria.

1. All of the Coloredo tracts are environmentally unsound.

To support this contention, one need only read the tract profiles prepared by the Bureau. Three main considerations here are: the presence of alluvial valley floors, the existence of critical winter range for big game species, and revegetation potential.

37-3 Alluvial Valley Floors - Of the seven large Colorado tracts (production potential above 500,000 tons/year), the Bureau has identified one with an AVF (Danforth Hills #1), four with potential AVFs (Danforth Hills #2 and 3, Hayden Gulch, and Lay), one with insufficient data to determine even the potential for AVFs (Williams Fork Mtn.). Only for one tract can the Bureau state with assurance that there are no AVFs (Iles Mtn.). Obviously, the presence of AVFs is, or should be, a primary consideration in tract delineation, since AVFs can easily disqualify an area from mining under SMCRA. The profiles all assert that mining on adjacent areas should not disrupt the valley floors or their hydrology but [redacted] specific data on the groundwater and hydrology of the tracts is totally lacking. Until BLM has that data in hand, any such blithe assertions are meaningless.

37-4 Critical winter range for big game species - Except for one tract on which the Bureau appears to have adequate data (Danforth Hills 3), all of the seven major tracts are entirely or partially comprised of critical winter range and/or migration routes for deer and/or elk. For example, it is stated that on Danforth Hills 1 and 2 the entire tracts are critical winter range for deer, that the entire Williams Fork Mtn. tract is critical for deer or elk or both, that Hayden Gulch is critical for deer or elk on parts of 12 sections within the tract, that Iles Mtn. is critical for deer or elk or contains migration routes for parts of 9 sections. The exact locations are not specified, however, so that one has no idea whether the critical areas are on the periphery of the tracts or in their heart. This habitat factor is certainly important in its own right, but it becomes even more central to a tract's suitability when considered with the following reclaimability estimates.

I am only speaking here of the 7 largest tracts, excluding Bell Rock, Pinnacle, and Grassy Creek. These will be dealt with in later comments.

Revegetation potential - The tract profiles state that due to poor soils and other factors, all of the tracts will have difficult or severe revegetation problems. We are told that revegetation will be difficult on the entire Danforth Hills 1 and 3 tracts, on 96% of the Danforth Hills 2 tract, on 86% of Iles Mtn., and on 23% of Lay. Further, there will be "severe" problems on 11% of Williams Fork Mtn. and 39% of Hayden Gulch. Here again, we are not told which portions of the tracts are sensitive. [redacted] though, that land which cannot be reclaimed cannot legally be mined. It makes little sense for the Bureau to lease land on which this is a problem.

37-5 cont'd

When these last two factors are considered together, even more problems arise, especially in terms of Unsuitability Criterion 15, State Resident Fish and Wildlife. Apparently, during the Williams Fork Unsuitability review the Colorado Division of Wildlife agreed that disturbances to deer and elk critical winter range and migration routes could be mitigated in all cases with the stipulation of site-specific mitigating measures. Thus, it was determined - supposedly on the basis of the reclaimability of the land in question - that coal mining would not have a significant long-term impact on the deer and elk even if their critical winter range and migration corridors were strip mined. The fact that BLM now says, however, that much of the land is both critical and very difficult to reclaim raises the question as to the validity of the Division of Wildlife's earlier sign-off. Perhaps no mitigation measures can ensure reclaimability of critical winter range on some or all of the tracts. For example, as we see on the summary table on p. 4 following, on Danforth Hills 1 and 2, virtually the entire tracts are both critical winter range and are predicted to have revegetation difficulties.

37-6 cont'd

[redacted] request that BLM reopen and reassess Unsuitability Criterion 15 on the basis of this new information.

2. The tracts were chosen with little or no regard for environmental considerations.

37-7 The truth of this statement is obvious from a glance at the summary table, the section immediately following, and the timing of the tract delineation efforts, which preceded and were done apart from environmental analyses.

3. The tracts delineated were obviously chosen on the basis of industry interest alone.

37-8 My examination of the industry expressions of interest submitted in the Green River/Ham's Fork region, Colorado portion, shows that all of the tracts delineated had at least one industry expression of interest, that at least six of the tracts correspond exactly to long-standing competitive lease applications under EMARS and before, that two of the tracts which were not lease applications are nevertheless in what BLM under EMARS had designated as "BLM proposed coal leasing areas". It is clear that the delineation process has been solely responsive to industry interest and that the Bureau has made little attempt to delineate tracts apart from those considered desirable by industry. Certainly, industry interest is a legitimate factor in choosing tracts, but by its sole reliance on that factor, Interior has in fact created another EMARS program.

If no other tracts are delineated, the only ones which Interior will be able to choose are those specifically nominated by industry for leasing. It hardly needs to be said that this result would be totally contrary to the intent of the new federal coal management program as it was presented to the public. New tracts desperately need to be delineated so that the universe of choices will exceed those areas specifically nominated by the coal industry. Otherwise, the entire process will be revealed as a total farce and as yet another variant of EMARS, EMARS III.

For documentation of the above, the following is a list of the nominators (i.e. expressors of interest) of each of the tracts, together with the tract's previous leasing history.

-- Bell Rock: Expression of interest by Empire Energy; Competitive Lease Application C-21981 (filed 9/17/74) by Empire Energy.
-- Danforth Hills #1: Expression of interest by Colowyo and Consolidation Coal; tract as delineated is identical to Competitive Lease Applications C-22836 (filed 7/11/75) and C-22839 (filed 7/11/75), both by WR Grace.
-- Danforth Hills #2 and #3: Expressions of interest by WESCAR and Consolidation Coal; tracts overlap Competitive Lease Application C-22838 (filed 7/11/75) by WR Grace.
-- Grassy Creek: Expression of interest by Grassy Creek Coal Co.
-- Hayden Gulch: Expressions of interest by Certar Oil, MAPCO, ARCO, WESCAR, Empire Energy, Freeman United Coal, H-G Coal, WR Grace; lies in "BLM proposed coal
-- Iles Mtn.: Expressions of interest by Certer Oil, ARCO, AMCA Coal Leasing Inc.; tract as delineated is more or less identical to Competitive Lease Application C-14738 (filed 12/17/71) by Empire Energy.
-- Pinnacle: Expression of interest by Energy Fuels; tract as delineated is identical to Competitive Lease Application C-22677 (filed 4/30/75) by Energy Fuels
-- Williams Fork Mtn.: Expressions of interest by MAPCO, ARCO, and Empire Energy; tract lies within "BLM proposed coal leasing area" in original Northwest Colorado Coal EIS.
-- Lay: Expression of interest by Utah International, Coastal States Energy, and WR Grace.

Thus, aside from relatively minor boundary adjustments, [redacted] for leasing consideration independent of industry desires. This must be changed before tracts are ranked.

4. The tract profiles show a woeful lack of environmental data which must be acquired before the Bureau attempts to prepare EISs or to rank the tracts.

37-9 The tract profiles show a consistent lack of baseline data, most notably in regard to ground water, vegetation, and soils. This information is essential to a reasoned choice among alternative tracts. Indeed, it is quite commonplace information, and will be required not only for the ranking and EIS preparation processes, but also for further environmental analyses at the mine plan stage. Thus, it is incontrovertible that the strictures of the new CEQ regulations apply (40 CFR 1502.22(a)):

> If the information relevant to adverse impacts is essential to a reasoned choice among alternatives and is not known and the

SUMMARY TABLE - MAJOR COLORADO TRACTS

Name/Number	Prod. Pot.	AVF?	Critical Winter Range?	Alluvial Valley Floors?	Strip Ratio	Tons/Acre	Tons/Man-Hour	Coal Type	Status of Interest
Danforth Hills #1 / 9-79-71	1,191 mt	Yes - Colorado Division of Wildlife	Yes - Colorado Division of Wildlife	Yes - Alluvial Valley Floors are present in the tract area	22 Bcy/ton	4/27	110 Bcy/man-hr.	Subbituminous Coal	Exploration Licenses, Competitive Lease Application
Danforth Hills #2 / 3,613.67	43 mt	Possibly - Assistant Director, Colorado Division of Wildlife	Yes - Colorado Division of Wildlife	Yes - Alluvial Valley Floors are present in the tract area	90 Bcy/ton	1,333	1000 Bcy/man-hr.	Subbituminous Coal	Exploration Licenses, Competitive Lease Application
Danforth Hills #3 / 3,191.49	3,556 mt	Possibly - Assistant Director, Colorado Division of Wildlife	Yes - Colorado Division of Wildlife	Yes - Alluvial Valley Floors are present in the tract area	100 Bcy/ton	1,229	875 Bcy/man-hr.	Subbituminous Coal	Exploration Licenses, Competitive Lease Application
Williams Fork Mtn. / 3,722.1	1.9 mt	Yes - Alluvial Valley Floors are present in the tract area	Yes - Portions of 9 sections of the tract are critical winter range for deer and elk	Yes - Alluvial Valley Floors are present in the tract area	150 Bcy/ton	692	925 Bcy/man-hr.	Subbituminous Coal	Exploration Licenses, Competitive Lease Application, BLM proposed coal leasing area
Hayden Gulch / 10,898.47	13 mt	Possibly - Assistant Director, Colorado Division of Wildlife	Yes - Portions of 12 sections of the tract are critical winter range for deer and/or elk	Yes - Alluvial Valley Floors are present in the tract area	100 Bcy/ton	571	1,200 Bcy/man-hr.	Subbituminous Coal	Exploration Licenses, Competitive Lease Application, BLM proposed coal leasing area
Harper Ranch / 11,074.69	2.714 mt	Possibly - Assistant Director, Colorado Division of Wildlife	Yes - Portions of 3 sections of the tract are critical winter range for deer and elk	No	5 Bcy/ton	1,050	1,100 Bcy/man-hr.	Subbituminous Coal	Exploration Licenses, Competitive Lease Application
Lay / 5,982.53	2.759 mt	Possibly - Assistant Director, Colorado Division of Wildlife	Yes - Portions of 3 sections of the tract are critical winter range for deer and elk	No	5 Bcy/ton	1,050	925 Bcy/man-hr.	Subbituminous Coal	Exploration Licenses, Competitive Lease Application

overall costs of obtaining it are not exorbitant, the agency shall include the information in the environmental impact statement.

How is BLM going to dodge this responsibility? Especially if hydrological, vegetation, and soils information requires field work to obtain, it is now winter, and the EIS is scheduled to be out by the end of February? It should be interesting to see the Department's apologists go to work on this issue.

In addition, historical and archeeological data are largely missing, as are data on Unsuitability Criteria 11, 12, 13, 14, and 19.

When does BLM plan on gathering this data? It seems to me that any time after tract ranking is too late, since this data will certainly have an important impact on the ranking process, especially if some additional tracts are delineated which will tend to have fewer environmental problems. [redacted] the present EIS schedule is surely to invite a NEPA-adequacy test.

5. The tract profiles do not adequately discuss off-site impacts or related development, each of which is essential to the ranking and EIS writing processes.

37-11 [redacted]portation is a factor of prime concern in tract ranking, yet none of the documents distributed to me give an adequate presentation of the impacts and implications of the transportation facilities necessary for development of the various tracts. All of the profiles are restricted to only the actual physical tracts themselves, and do not discuss related facilities or place the tracts in any larger context.

37-11 This is a severe methodological flaw which must be corrected as soon as possible. If it is not, the tract ranking and analyses will surely be deficient. For example, the construction of a rail line into Lay will open an entirely new part of Moffat County up for coal development. Do we want to do that now, further impacting Craig and creating additional pressure for coal development in the County? If an entirely new area is to be opened up, should that be it or are other parts of the study region more suitable? Similarly, with Bell Rock, do we want to allow mining operations to be initiated on the north side of the Yampa, when the Colowyo RR and all existing development is on the south? Do we want to issue more leases immediately adjacent to the Colowyo Mine, even though Colowyo has only now started on its 30 year mining plan for its existing lease? (The three Danforth Hills leases) And does it make sense to issue the Pinnacle tract, supposedly to Energy Fuels, when they intend to begin a large underground mine soon and have several other lease applications currently in the works? For which other tracts will new railroads be necessary and what will their direct and indirect impacts be? What is the possible relationship between the Williams Fork Mtn. tract and the pending and issued leases which surround it - Utah International lease C-097641, UI Competitive Lease Application C-3506, and Empire Energy State lease 358/13 on the west; MAPCO State lease 392/13 on the north; American Electric Power lease C-012894 and United Electric State lease 279/13 on the south? What relation, if any, does the Hayden Gulch tract have to the Ruby Construction proposal discussed in the NW Colorado EIS? And so on, and so on.

37-11 Detailed analyses of related transportation facilities, their impacts, and alternatives must be included in the tract profiles so that this information will be available in the tract ranking process. The Bureau must not fall into its old habit of segmenting analyses.

6. Miscellaneous questions and concerns.

37-12 -- What assumptions were used for the salinity analyses?

37-13 -- One of the purposes of the coal management program is to encourage more desirable patterns of development. What is a more desirable pattern of development, especially in the context of the study area?

37-14 -- How can some tracts (eg, Lay, Williams Fork, Red Rim) exceed the maximum federal acreage limitations?

37-15 -- How can the Grassy Creek LMU contain two parts which touch at only one point?

REGIONAL LEASING TARGET

37-16 I would like to start off this section of my comments by echoing John Wieser's objections and requests regarding the decision to increase the leasing target to 416 million tons (his letter of Nov. 28, pp. 1-5), especially those requests contained on p. 5.

Certainly, we need a full disclosure of the reasons and rationale for such a significant increase in the target. But my research has recently disclosed another huge discrepancy underlying the lease target analysis which I offer here. Since my analysis has the effect of halving the suggested target, I hope and expect the Bureau to answer it as expeditiously as possible.

A few days ago I was talking with [redacted] Porter of the Colorado State Office P&EC staff, asking him about the methodology and assumptions which went into the tract profiles' socio-economic impact analysis. I was especially interested in what is there termed the "trended environment" for the study region. It turns out that the Bureau, as a baseline for socioeconomics, is assuming that the Colorado portion of the region will have coal production which equals that set forth in the mid-level scenario of the Northwest Colorado Supplemental Report. Table 1-2 of that report and Mr. Porter's figures show that the Bureau is assuming that 1987 production from the Colorado part of the Green River region will reach some 27.4 million tons. This baseline number, however, in the NW Supplement, assumes no new federal leasing other than short-term leases needed to sustain existing production (p. 1-14)

But if one goes to the Federal Register notice of October 5, we read that the Colorado part of the region has a production goal of some 16 million tons for 1987. Therefore, the Bureau is assuming that Colorado production will be nearly double that required of us by DOE even if no new leasing occurs. Yet the [redacted] goes on to show that Colorado production for 87 will only equal some 14.8 million tons - hence the need for new leasing (the 14.8 million ton figure is arrived at by adding the Colorado portion of the two tables on FR page 57507).

Clearly, something is very confused. The Bureau cannot use the higher figure to calculate socioeconomic "baselines" while simultaneously using a number only half that size to justify further leasing. Either the NW Supplement is correct or the entire socioeconomic baseline has to be run over again, in which case the impacts of new leasing will certainly not be "low" for every tract, as BLM now asserts in the tract profiles.

Let us carry this one step further, however. If the NW Supplement is correct, as was - supposedly the NW EIS before it, which estimated 1987 production at 28.3 million tons per year (interpolation from NW EIS, Vol I., Table RI-1) in '87, and if the Federal Register projections are correct for Wyoming (48 million tons), then the actual shortfall is not 17.2 million tons/year, but 9.4 MTPY:

85.2 MT	DOE production target
- 27.8 MT	CO. share with no further leasing (NW Supp., p. 1-13)
57.4 MT	
- 48.0 MT	WY. prod. with no further leasing (FR)
9.4 MT	shortfall

Note that this assumes no production from existing leases without pending mine plans and is thus conservative.

Translating this 9.4 MT shortfall into a leasing target, there are two methods - the pre-November 14 method and the post-November 14 method. Either one gives a target much lower than either 321 MT or 416 MT:

Pre-Nov. 14 method: 9.4 MT x 30 x .56 ÷ .9 = 175.4 MT leasing target
Post-Nov. 14 method: 9.4 MT x 30 x .6 ÷ .8 = 211.5 MT leasing target

Please reconcile this great discrepancy, if you can. It may well be that you should be leasing only half as much coal as you plan.

38

UTAH INTERNATIONAL INC.
BOX 187 - CRAIG, COLORADO 81625
303-824-4401

July 8, 1980

Mr. Dan Martin, Team Leader
Bureau of Land Management
Craig District Office
P.O. Box 248
455 Emerson Street
Craig, Colo. 81625

Dear Mr. Martin:

Utah International Inc. (Utah) herein submits comments on the Green River - Hams Fork Draft Environmental Impact Statement for your consideration. Utah presently operates the Trapper Mine southwest of Craig and has interests in other coal reserves throughout the Green River - Hams Fork region.

The draft EIS your office has prepared is generally well written, factual and comprehensive. We hope you will accept our comments and criticism in the constructive attitude they are intended.

Sincerely,

Wayne E. Sowards

Wayne E. Sowards
Asst. to the Mine Manager
Trapper Mine

WES:ems
Enclosure
cc: JTA
JLB
RCD
ROW
File

GENERAL

1) The proposed system of leaaing advocstea limiting the number of trscts leased to just satisfy regional and national production goals. We believe this is counter to prudent and optimum development of the nation's coal resources. While existing statutes mandate a deliberate snd careful commitment to coal production after due conaideration for multiple uses and trade offs, they do not demand that regulatory sgencies should further control development of coal resources considered "acceptable" or "suitable" for developmeot. To do so assumes the Federal government has sufficient knowledge to know which site is most economic to develop and which site will best serve the coal market. This kind of determination canoot be made on the basis of the current data aod requires in depth market analyses and mioe development planning. Once s tract is found "scceptable" for leasing, it should be proffered for competitive bidding.

 The more tracts leased, the more competiton there will be. Moreover, it will be more likely thst the most economic of the "acceptable" tracts will be developed.

2) While we appreciate the complexities of assessing tbe probable impacts associsted with the vsrious leasiog alternatives, we believe the draft ElS unduly simplifies the evsluation in seversl instances. "Worst case" analyses are repeatedly used throughout the document to produce what is cumulatively a pessimistic interpretation of impacts. This is especially true for the evaluation of impacts to water resources, air quality, land use and wildlife. This observation will be further explained in the appropriate following sections of comments.

3) The draft ElS should include the supporting information to demonstrate how tract preferences were determined. On page 7, it is explained that the trscts were ranked during a Regional Coal Team meeting in December, 1979 and that the minutes of that meeting are available at BLM's Utah State Office for review. The trsct ranking is paramount to reviewing the ultimate conclusions of the report, i.e. the preferred lessiog alternatives. Although the data provided in the matrices of Part Il of the draft EIS are useful, they do not demonstrate how the BLM found one tract to be preferrable to another for leasing. For example, a review of tbe matrices for China Butte (the most preferred tract) and the Williams Fork Mountains (the least preferred tract) shows that both bave approximately an equal amount of positive and negative impacts. A direct comparison is somewhst difficult to make however since different terminology is uaed to describe "significance of anticipated impact". For China Butte for example, significance of impacts are "none, low, moderate, high, minor, very minor, relatively minor, major" or just described without any rating at all. Significance of impacts at the Williams Fork Mountains are "insignificant, significant, low, possibly significant, higb, minor and short term, very minor, moderate, nooe, little nr none, minimal, severe, no change, medium", described without a rating or not rated or described at all. Moreover, some factors seem to be conaidered at one tract but not another. Noise for example is evaluated for the Williams Fork Mountains tract but not the China Butte tract. Compsriaons are furtber complicated because the matrices do not follow a consistent format.

Climate and Air Quality cont.

from Victory Way straight towards the sampler. The sample data describe TSP levels adjacent to and downwind from Victory Way. They do not describe represeotative TSP levels in Craig.

pgs. 223-224 Does the TSP modeling described on these pages consider deposition? This is an important component in describing expected TSP levels that is frequently omitted in air quality monitoring. The draft EIS states that a set of worst case meteorlogical conditions was used in evaluating expected TSP levels and concludes that the Trapper and Wisehill mines will generate TSP levels in excess of standards within several kilometers of the mines. This is io disagreement with air quality modeling done for Trapper Mioe io 1979 by Environmental Research and Technology, Inc. (ERT). A copy of that modeling work is attached for agency reference.

VEGETATION (Vegetative types/threatened aod endangered plants/trended baseline)

pg. 188 The draft ElS concludes that most mioing companies plao to use only a few native species for revegetation and that reestablishment of native vegetation will depend almost entirely on natural succession. Does this statement consider Office of Surfsce Mining regulations which require using native species for revegetation? The more recently approved mining and reclamation plans (such as for Energy Fuels) have described seed mixes that include a variety of predominantly native species.

The document further states tbat 20 to 50 years will be required to establish a self sustaining ecosystem comparable to premining conditions. Is tbis statement made in consideration of existing regulatory requirements for topsoil salvage and replacement and revegetstion? How wss this conclusion arrived at? lt appears to be another "worst case" kind of assessment. The implicstion of such a atatement is that the vegetation will have no utility for 20 to 50 yeara.

Under "Short-Term vs. Loog-Term, the draft ElS concludes "The Federal action would reault in the total destruction of the vegetative ecoayatems by types shown..." lt is unlikely that ecosystems will be totslly destroyed. A more appropriate statement would be "The Federal action would likely cauae the destruction of portions of vegetative types as shown in table 4-13. Witb succesaful reclamation, these types will be replaced with vegetation of similar utility".

Under "Irreversible/Irretrievable" the draft ElS atates tbat "Vegetative productivity would be irretrievably lost for the life of the minea." Thia ia a "worst caae" conclusion and will vary from operation to operation dependent on the life of the mine, the post mining land use, and the reclamation difficultiea. For larger operationa with 20-35 year lives, it is probable that reclaimed areas will be used by wildlife and liveatock during the life of the mines.

The draft ElS also atatea that "Native vegetative seed sources would be irretrievably loat". Subatantial numbera of volunteer seedlings occur from replaced topaoil from "native vegetative seed sources". Adjacent undisturbed areaa provide "native vegetative seed aources". Ia thia comment made in conaideration of current reclamation practices?

WILDLIFE (habitat/animals)

pg.13 Throughout the drsft EIS, the point is made thst destruction of ponds and streams will cause significant squatic habitat loss. Existing OSM regulations require that all drainage from disturbed areas pass through sedimentation dams to control total suspeod solids. At the Trspper Mine, this has resulted io seversl additional ponds being constructed that are svailable for wildlife use.

pgs. 189-192 The draft EIS concludes that for the analysis years, all of the disturbed lands will be unavailable for wildlife use and there will be no use of areas undergoing reclamation. This "worst case" approach is nnt consistent with actual experience at mines in the region where wildlife use of lands undergoing reclamation appears primarily limited only by access. Moreover, rodents, i.e. prey species for raptors and small to medium sized mammalian predators, ofteo are very prolific on newly reseeded sreas. The assumption used in the draft ElS is harsher than what can realistically be expected.

Moreover, the 1/4 mile buffer added to disturbed sress and assumed to not be uaed at all by wildlife is another "worst case" and unrealistic assumption. Most big game upland game, and medium sized mammals continue to frequent the areas within and contiguous to active mining. It may be accurate to say their use is curtailed to some undefined extent but it is not correct to say it is prevented.

The report further assumes that it will take 25 years to restore any usable wildlife habitat after miniog. This is another undocumented "worst case" sssumption. Certainly sage and grass communities cao reasonably be expected to reestsblish to s usable condition in less than 25 years. Moreover, mountain shrub communities are presently too rank or too dense for optimum use in many of the lease tracts. Perhaps 25 years would be required to reestablish such rank, dense stands but usable (and improved) stands should develop in a lesser period of time.

CLIMATE AND AIR QUALITY (climate/air qusli ty/noise)

pg. 15 The existing dats are not sdequate to describe the levels of the suspended particulates io Craig. It is not reasonable to believe that a single hi-vol sampler located adjacent to and downwind from the main street of Craig measures a representative air sample for the city. This kind of dsts would be completely disregarded in any other kind of environmental monitoring. A single quadrat cannot describe a vegststion type or a wildlife population. Neither can a single sample point located in a high use ares describe Craig air quality. lt would be incorrect and imprudeot to reach a decision that Craig is in violstioo of air quality criteria on the basis of such data.

pgs. 222-223 The draft ElS sgain refers to high TSP levels in Craig at the Moffat County Courthouse. As previously explained, we do not believe these data alone are reliable. This is supported by the fact that 50% of the fugitive dust source has not been explained. The monitoring site is adjacent to sn active street with continudus traffic. Craig streets are heavily sanded during winter aod early spring months for traffic ssfety and this provides copious material to be ground up from traffic and entrsined as fugitive dust. Moreover, the prevailiog winds sre from the southwest and would blow any emissions

Vegetation cont.

pgs. 188-189 Under "Uncommitted Mitigation" the draft EIS discusses requiring consultstion with state and federal wildlife departments requiring detailed baseline data on climatic conditions, soils, vegetation, wildlife snd current land use; requiring topsoil segregation by horizons, and; requiring replaced topsoil to be analyzed for soil fertility. All of these actions sre already required by existing regulations.

GEOLOGY AND MINERAL (physiogrsphy/geology/paleontology/minerals/soils)

pg. 176 The draft ElS discusses mulching as a mitigative measure and recommends applications of 3-4 tons/acre. This is fsr heavier than the 1.5-2 tons/acre most commonly used and recommeoded in most literature.

The draft EIS also recommends topsoil replacement such that bare topsoil is is not subjected to heavy runoff from melting snow. The only way this could be dooe is to lay the topsoil down io the Spring when its too wet and then seed and hope for plaot establishment by the end of the growing season. This would require unlikely climatic circumstances and would be in conflict with 30CFR 816.113 since the normal period of plantiog in the study region is in the Fall.

SOCIOECONOMIC ENVIRONMENT (demography/employment and income/local finances/existing attitudes and values/old timers and new comers/housing snd its implicstions/education and medical facilities/a case history of energy boom social impact processes/transportation/land use)

pgs. 218-221 "Land Use" The drsft ElS concludes that loss of watering facilities during the life of the mine will eliminate existing grazing areaa. Does thia conclusion consider the sedimeot dams required by existing OSM regulationa, the distance animals will travel to water, and the requirements to reclaim to aupport the poat mining land uae? At the Trapper Mine, experience shows that conatruction of sediment dams makea more watering sites available for wildlife aod livestock than before mining.

The draft report further concludes that the entire leaae tracta will be unavailable for liveatock use aa soon aa development begins in 1987. This ia a "worst case" and unrealistic aasumption. For small tracts such as Bell Rock, Empire, Graaay Creek, Danforth Hills #1 and Pinnacle, thia may be valid. For the other larger tracts, it is unlikely that grazing will ever be terminated on the entire tracta. At the Trapper Mine for example liveatock grazing is allowed on all undistrubed rangelands within the lease boundaries.

The draft ElS statea that 7.1 acres/AUM was used to calculate loat AUM's. Does thia figure allow for the croplands in the study areas and forage requirementa of elk, deer and antelope?

Under "Irreversible/Irretrievable" the draft EIS concludea that the Federal action would cause the losa of productivity of wildlife winter range for the life of the mine plus 20 to 50 yeara for subaequent reclamation. What is this time frame derived from? It ia likely that many reclaimed areas will be productive and uaable in far leas time. The time required will be a function of numernus factors. This issue is also addreaaed in the comments on "Wildlife" snd "Vegetation".

WATER RESOURCES (ground water/surfsce water)

pgs. 181-183 Do the evaluations of probable salinity increases consider thst most runoff (and associated salts) will occur during Spring thaw or after significsnt precipitstion events when TDS levels are lowered by dilution? lt seems improbable that the TDS increases contemplsted by the draft EIS during low flows will io fact occur since there will be little if any runoff during these periods.

Again, a "worst csse" approach is used in assuming "that concentrstions in leachate from the reclaimed spoils reaching the streams would increase three fold over premining levels and ground water discharge from the spoils aquifers would increase 25 percent,..." This cnncept is applied tn produce table 4-9 and tn "quantify" the expected impacts nf all slternatives despite the excellent discussion provided on pages 178-179 which explains why such assumptinns sre nnt realistic.

pg. 185 Under "Shnrt Term vs. Long Term" the draft report cnncludes that "Leaching nf the reclaimed spoils materials wnuld increase the dissnlved snlids cnncentratinns of grnund water in the mined areas two tn three times premining levels". This "worst case" assumption is apparently a carry nver frnm the assumptinn made nn page 183 that leachate frnm the spoils would have a TDS level 3x that of preminè cnnditions. It dnes nnt follow however, that because tbe TDS level in the spnils leachate will be 3x higher that the same degree nf change will occur in the aquifer it enters. Recharge rates in the study srea are very low and the areas affected are nf limited areal extent. The nnly way the aquifer wnuld be impacted to the extent indicated is if the leachate is the sole snurce nf recharge to the aquifer.

ESD 80-617

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ROCKY MOUNTAIN ENERGY COMPANY

ENVIRONMENTAL SERVICES
CLARK M BOLSER
MANAGER

July 7, 1980

Mr. Dan Martin, EIS Team Lesder
Bureau nf Land Management
Craig District Office
P.O. Bnx 248
Craig, Cnloradn 81625

Dear Mr. Martin:

Attsched are Rncky Mnuntain Energy Company's (RMEC) comments nn the Draft EIS for cnal leasing in the Green River-Hsms Fnrk reginn. We have played an active rnle in the lease srea review prnceas in Snuthcentral Wyoming and appreciate this nppnrtunity to prnvide specific commenta. Because our expertiae is primarily with the prnpnsed leaae areas in Wyoming, in particular the Red Rim/China Butte tracts, our commenta cnncentrate nn theae twn cnal areas.

We have reviewed the twn vnlumes in detail and waot tn commend the BLM, USGS and State personnel frnm Cnlnrado and Wynming who have worked nn the statement. A good wnrk product haa been developed considering the time and manpower limitstions placed nn the project ataff. Underatanding these conatrainta, we believe sn adequate ssseasment of the eovironmeotal and aocioecnnomic impacts ssanciated with the southern Wynming coal lease tracts has been achieved. While limited apecific areas of the atatement need revisinn (auch as updating the site specific anslyaes to reflect new or additinnal informatinn) we believe that the majnr issuea raised during the evaluation process have beeo appropriately addressed in the Draft Statement.

We hnpe the enclnsed infnrmatinn is uaeful for the develnpment of the final Envirnnmental Impact Statement. Please don't hesitate tn contact me if you have sny questions.

Sincerely,

David E. Preston

David E. Preatnn
Prnject Envirnnmental
Specialist

Attachment

4704 HARLAN STREET DENVER COLORADO 80212 (303) 433-6841

ROCKY MOUNTAIN ENERGY COMPANY COMMENTS
GREEN RIVER-HAMS FORK DRAFT ENVIRONMENTAL IMPACT STATEMENT

Vnlume I Summary

Our principal concern with this section is the statement regarding the time frame required fnr restoratinn of the disturbed landscape (20 to 50 years). This is inconsistent with other reclamatinn time frames presented in the site specific analyses and cnuld be misleading. We believe that time frsmes presented in the statement are cnnservative and that adequate reclamation cnuld be accomplished in lesa than 20 yesrs. Current research is making encouraging gains in reclsmation technolngy. An overview of recent and on-gning shrub establiahment research is presented in Attachment 1.

A relatively unique reclsmatinn cnncern hss been identified for the Red Rim area; rapid restnration of crucial pronghnrn winter range. Tn demonstrate the potential for rapid reclamation nf crucial winter range, BLM aod RMEC have established s test aite on Red Rim.

The site cnnsists nf 10 acres within an exclnsure where mining has been simulated and reclamatinn procedures are being tested. The technique being demonstrated is transplanting mature sagebrush planta (Artemisia tridentata) using a tree spade.

During the summer of 1979, mining waa simulated by uaing acrapera tn stockpile topsoil and excavste overburden to a depth nf 10 feet. The nverburden waa replaced and the tnpaoil put back using the aame heavy equipment.

Sagebrush waa transplsnted in the fall nf 1979 and spring of 1980. Plugs were remnved from the teat aite and replaced with pluga cnntaining native aagebrush plants from the adjacent cnmmunity. Tranaplanta were aubjected tn varying wstering and fertilization regimea to identify useful establishment techniquea.

Each transplant was csrefully described by recording plant height and graphing csnopy cover. Survival and grnwth nf each test plant will be mnnitored nver the next several years. ln additioo, plants within the exclnaure, but not trsnsplanted, and plants nutside the exclosure have been marked ao thst cnmparianns can be made between transplanted and natural growing plants and between grazed and ungrazed individuals. Initial results are encnuraging. Nn mortality of fall transplanted aagebrush plaots hss been observed. We are alsn encouraged by the results of similar types of shrub establishment research that have been cnnducted within the reginn (Attachment 1).

Vnlume I Deacriptinn nf the Envirnnment

This section appears tn be adequate fnr the purpnsea nf a regional environmental description. We suppnrt the binlogical reaource narrativea, but have several specific comments. In the reginnal aetting deacription, a genersl primary prnductivity value fnr the sagebruah vegetatinn type of 1.8 tnns per acre/year is presented. In areas we have sampled in aouthcentral Wyoming, productinn values for this type have been apprnximately 1,000 lbs per acre/year. Production valuea aa high as 3,600 lbs per scre/year have been encnuntered, but only in wet meadow types. Overall, nur aite apecific vegetatinn wnrk agrees with the DEIS narrative. We have included the results of site specific mapping efforts (Attachment I1) which support the DEIS findings.

We also nnted a discrepancy between the regional aetting descriptinn and the site specific snalyaea with reapect to characterization of anuthern Wynming climate. A growing seaann nf 130 days is preaented for Rawlins while growing aeasnns of 200 daya are preaented fnr Red Rim and China Butte in the site apecific analysea. We believe that the former period is mnst representative nf actual cnnditinna.

Volume I Environmental Consequeoces

Although our comments regardiog this aegment of the DEIS are more extensive than those covering other areas, we believe that the aasessment is appropriate giveo.the size of the evaluation area and the limitations of available baseline and mine plan information. Comments on the impact assessment are divided according to major subject headings presented io the DEIS.

Soils

Handling overburden entirely with bulldozers cao lead to piping (erosive underground waterways). If topsoil texture is important, overburden might be handled using scrapers aod topsoil selectively handled by crawler tractors. This would give firm soil structure at lower levels while leaving topsoil friable for optimum root establishment.

Vegetation

Io refereoce to stockpiled topsoil it should be noted that oot all micro-orgaoisma are lost wheo topsoil is stripped. Studies by Argonne National Laboratory at Jim Bridger power plaot have shown that storage of topsoil for up to 2 yeara ia oo more damagiog to the microbial commuoity (oecessary for importaot nutrieot cycliog fuoctiooa) thao the initial impacts of removing the topsoil. Investigations of micro-flora oo strip-mioed spoils have shown that roots of plants grown io the spoils have vesicular arbuscular endomycorrhizal fungi: mycorrhiza formatioo io the roots of plaots growing oo mioe spoils can increase plaot growth. (Pooder, 1979).

Some macro-orgaoisms also remaio viable io topsoil that is beiog stored. Plants that reproduce vegetatively aod seeds from various sources may

Vegetation (continued)

grow following proper topsoil handling. We have found volunteer sagebrush seedlings surrounding soil plugs at the reclamation plot. This suggests that the plugs are either the source of the seed or are providing the necessary environment for wind-blown seed.

Because topsoil removed prior to mining containa a high nutrient content along with seed aources, even natural succession can be rapid. Crofts and Parkin (1979) fouod shrub density approximately equal to that of undisturbed areas within 17 years of mining.

Wildlife

Terrestrial Habitat Losses

Estimated reclamation times seem excessive. Grasslands should be reestablished withio 5 years of topsoil replacement, shrublands within 12 years. Compare statement oo thia page with that on pages 11 and 61 of Volume 2 where reclamation is estimated to be between 5 aod 20 years.

Reclaimed areas gradually increase in usefulness to wildlife beginning at the momeot the topsoil has been replaced and leafy forb invaders begin to recolooize. Full production may not be reached for several years, but some reuse of the area will begio almost immediately. In the case of raptors, for example, usefuloess may be obtained the season following reconstruction of nest sites. Some potential reclamatioo and mitigation techniques which affect wildlife are iocluded as Attachmeot III.

Large aoimals may oot use the area next to an active mine, but the comment should not apply to all wildlife. Many species use areas immediately adjacent to mioes (particularly small mammals). Cover appears to be the limiting factor for rabbits, bushytail woodrats, mice, etc. Cover io the form of fences, outbuildings, brush and rock piles are sooo occupied by these species. Predators rapidly discover this expanded prey base aod shift territories to take advaotage of the situatioo. Small birds such aa the westero flycatcher use mao-made cover for oestiog aod brood reariog.

Animal Losses

The assumptioo that increased traffic will result io iocreased highway mortalities ia probably true. However, this relatiooship does oot remain a coostaot fuoctioo of traffic volume. If limited populations are preseot, other factors come into play. There are only so maoy grouod squirrels that can live aloog roadways. As their oumber is reduced, fewer mortalities will occur irrespective of traffic volume. With other species (such as deer) some learoiog is iovolved ao that ao animal accustomed to traffic is less likely to be killed thao one oew to the situatioo.

Areas where iocreased vehicle traffic will be most important are where roads cross migratioo paths. This brings ao aoimal that may have oo experieoce with vehicles on a highway into cootact with traffic. Mortalities io thia aituatioo probably do rise proportiooally to traffic volume as maoy such aoimals might oeed to cross such a hazardous area during a short migratioo period.

While aoimal losses will probably increase due to the projected iocreased humao population, this is at least partially cootrollable. Wheo the daoger of exceasive harvests occura, deer liceoae numbers cao be limited, rabbit seasoos cao be ahorteoed or bag limita lowered etc. Iocreaaed reveoues from additional takes aod liceose sales cao fuod wildlife research, habitat developmeot projects aod additional law eoforcemeot activities. The purpose of wildlife managemeot ia to provide recreatioo for people. A population ioflux will put more pressure oo the resource and challeoge managemeot programs, but should not be listed as a totally negative impact.

Wildlife

Animal Losses (contioued)

Wildlife concerns repeatedly center around antelope aod sage grouse. RMEC has comprehensive studies underway oo both species. Results are preliminary, but the first progress report of the antelope project is included as Attachment IV. The progress report oo aage grouse will be available this fall.

Socioeconomic Environment

In predictiog socioecooomic impacts, the Ioterior could take advaotage of data sources that exist io the region. Predictions in the DEIS sometimes vary with those made locally. An example of this is shown in the DEIS where it predicts the populatioo of Baggs in 1987 to be 448 in the "oo action alternative", aod a population of 516 in the "maximum alternative". Studies that were done by the Carbon County Council of Governments/Industrial Aasociation predict the Baggs' populatioo to be 845 by 1987. The EIS predicts Haona's population io 1987 at 2,680 io the "no actioo alternative", aod 2,883 io the "maximum alternative"; the Carboo Couoty Couocil of Governmeots/Iodustrial Associatioo estimates this populatioo will be 2,400. This data is available through the Carboo County Council of Governments aod should be utilized io preparing the final EIS. Thia should eliminate what appears to be iocoosistencies io the DEIS. This iodustrial/governmental cooperatioo could also be utilized by the Interior in estimating the mitigatioo efforts that might be needed in addressiog these socioecooomic impacts. Such plaooing efforts are on-going and various alternative strategies have beeo developed.

Literature Cited

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July 8, 1980
Ref: PRP-2-2-BLM-20

EIS Team Leader
Bureeu of Leod Menegement
Creig District Office
P.O. Box 248
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Craig, Coloredo 81625

SUBJECT: Comments on Draft Green River-Hams Fork Regionel Coel Eovironmental Impect Statemeot

Dear EIS Team Leeder:

NERCO, Inc. appreciates the opportunity to comment on BLM's Green River-Hams Fork Regional Coel Draft Environmentel Impact Statemeot (DEIS). NERCO is en eoergy development subsidiery of Pecific Power & Light Co., e western utility serving customers in six stetes. Through its subsidiaries, NERCO conducts surface coal mining operatioos in Wyoming, Montena and Alabema. It elso holds federel coel leeses in Sweetwater end Cerbon Couoties, Wyoming, known as the Cherokee Mine.

Cherokee is to be a 6 millioo too per yeer mine with production sterting io 1986. It waa iocluded as ooe of three mioes in the Regionel aod State Specific Analysis in the Southcentral Wyoming EIS, published March 22, 1979. Cleerly the Cherokee Mine is within the Creen River-Hams Fork Coel Region.

As en energy producer end especielly in light of our intention to develop the Cherokee Mine which fells within this DEIS Region, we heve reviewed the proposed DEIS statements in light of their impact on our developmeot of the Cherokee Mioe end potentiel ecquisition of federel leeses surroundiog this mine.

In its anelysis of the Purpose And Need For Action end the Alternatives, the DEIS is inedequete in light of the changiog market and productioo needs for coal in this country. Although the DEIS expleins how the 520 million tons terget figure for leesing was edopted, the problem with this enelysis end review is thet the DEIS does not cover the potentiel espect of e cootinuelly increesing need for coel. This short fell is e result of deted studies aod targets from which the BLM formulated its proposed leasing levels. Thet these tergets and studies by DOE ere deted is supported by the U.S. Depertmeot of Justice (See letter deted Jeouery 3, 1980 produced by Nency H. McMillen, Attorney, Energy Section, Anti-trust Division to Chuck Rich, Director, Office of Coel Leesing,) end e report that is presently beiog prepered by the Generel Accounting Office (CAO). Purportedly, the CAO is steting thet the Ioterior should be leesiog 3 times the 520 million toos it plans to sell io the Green River-Hems Fork Regioo next January. (See Coel Outlook, June 30, 1980).

The DEIS analysis should include an edditional elternetive which would include the additional tracts which were "nomineted" but were not included in the present alternatives. This would provide en EIS basis for inclusion of trects not now in BLM's leesing terget in the 1981 sale. The purpose of eo EIS, as set forth by reguletions implemented under NEPA, is to "serve precticelly as an importaot contribution to the decision making process and will not be used to rationelize or justify decisions elreedy made" (40 CFR 1502.5).

NERCO believes thet the coal production needs in the Green River-Hams Fork Region for future production shows e vastly increased oeed of federel leasing io 1981 beyond the 520 millioo tons target as currently set by BLM. This is beaed on the need by NERCO for edditiooel federel leases at its Cherokee Mine to enter into long term contracts for delivery of coel to the Cherokee Cleen Fuels Project. This project will be a coel gesificetion plent to produce substitute naturel gas and is scheduled to open by 1986.

We urge you to consider these comments.

Sincerely yours,

W. W. Lyons

WWL/eec

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WYOMING
EXECUTIVE DEPARTMENT
CHEYENNE

ED HERSCHLER
GOVERNOR

July 7, 1980

Mr. Dan Martin
EIS Team Leader
Green River/Hams Fork RCT
Bureau of Land Management
Craig, Colorado 81625

Dear Mr. Martin:

Reference is made to the Draft EIS (Coal) for the Green River/Hams Fork Coal Region.

Since the publication of the above mentioned document, several proposals have surfaced which were not specifically identified by the RCT. Two major developments which should be given consideration in the Green River/Hams Fork DEIS are:

1. A proposed coal-based synthetic fuels plant to be constructed and operated by Rocky Mountain Energy Company and several co-sponsors. The proposed facility would be located near Creston, Wyoming, and would utilize coal from the Cherokee Coal Tract; and

2. The potential exists for a mine-mouth generating facility in the same general vicinity which, depending on electric load growth, would be on-line by the mid-1990's.

I would strongly urge the EIS Team to contact Rocky Mountain Energy and Tri-State Generation and Transmission to ascertain the exact nature and commitment to these proposals. The potential socio-economic and environmental impacts associated with these projects, as well as the proposed federal lease of Red Rim and China Butte may seriously strain the ability of that portion of Wyoming to adjust to the rapidly changing economic situation. These developments coupled with an understated population "base case without leasing" could result in less than adequate steps being planned and undertaken to mitigate the demands that will be placed on the infrastructure of the communities in Carbon and Sweetwater Counties.

The primary concerns are housing, sewer, and water financing. It would seem logical that some type of task force

be developed to incorporate the plans and financial capabilities of the minerals industry with the planning and administrative capabilities and needs of the various units of governments in the area. Lead times appear to be adequate to accommodate this new round of growth if provisions are set forth now to handle the impacts and demands. The primary problem in trying to address the socio-economic impacts is the timing of the proposed developments. Unfortunately, a crystal ball is not available. This further complicates efforts to put together the financial package necessary to alleviate the impacts. Added to this is the difficulty in trying to distribute the expected population resulting from increased levels of energy development. The majority of these concerns were raised by Rawlins City Council President, June Aylsworth, in a November 5, 1979 letter to you.

The DEIS (p. 204) points out the trouble with trying to estimate the impacts on specific communities. Nevertheless, considering the important economic role that Rawlins serves in that part of Wyoming, it is safe to assume that Rawlins will experience the most absolute, as opposed to relative, effects of the leasing related impacts. Therefore, the attention given to the impacts that may befall Rawlins can only be described as extremely limited and highly generalized.

Comments from other agencies are attached for your information and consideration in developing the FEIS.

Sincerely,

Warren G. White
Planning State Program
Principal Analyst

WGW/tm

Enclosures

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THE STATE OF WYOMING

JUN 30

ED HERSCHLER
GOVERNOR

Game and Fish Department

CHEYENNE, WYOMING 82002

EARL M. THOMAS
DIRECTOR

June 27, 1980

EIS 237 Red Rim-Chins Butte
Rocky Mountain Energy
Proposed Reclamation-Mitigation
BLM-Rawlins District

Mr. Warren White
State Planning Coordinator's Office
2320 Capitol Avenue
Cheyenne, Wyoming 82002

Dear Warren:

This is in response to your request for our comments regarding the Rocky Mountain Energy proposal for Reclamation and Mitigation on Red Rim-China Butte as presented at the public hearing in Rawlins on June 19, 1980, regarding applicatioo of the unsuitability criteria.

It is obvious the intent of the proposal is to expedite mining on Red Rim-Chins Butte by showing that Rocky Mountain Energy can mitigate or eliminate wildlife problems anticipated to occur if the area is mined. The document begios by saying that "it is premature...to establish specific reclamation procedures and impact reduction measures to be used...". We think this is the key to these recommendations—they are premature, as well as poorly or non-documented.

P.1 "The value and practicality of any mitigation and reclamation measures must be considered and selected on the basis of compatibility with the mine plan and feasibility in terms of mine economics." In other words, if mitigation and reclamation cost too much, they are impractical. One of the contentions of the company has been that reclamation is possible with few problems. This statement intimates what we expected—reclamation will depend upoo economics. In our opinion, if the area costs too much to reclaim, it is uneconomical to mine.

P.1 "...it is felt that use of this type of approach to reclamation and mitigation will reduce mining impacts to an acceptance level." We were originally told that the company could reclaim this area, that

wildlife impacts would be slight with the measures they were going to use to reduce impacts. Now we are told impacts will be reduced to an "acceptance" level. Whose level of acceptance, ours or the company's?

P.2 Revegetatioo.

1. Shrub esteblishment - the objective is "repid development of a diverse cover of native shrubs..." How rapid? What ie the time required to establish these shrubs? What happens to these enimals while the arees are feoced to prevent grazing? Will irrigation be required? If so, for how long? Shrubs planted as containerized seedlings on the Hanna minesites did not establish io the absence of irrigation, despite the fact they had well-developed root systems. Direct seeding has not worked well for big sagebrush. There should be documentation here to prove that the species the company intends to plant will grow and that the methods the company iotends to use will work.

 What studies heve been done to document the food habits of antelope on the Red Rim winter range? The company cleims to know what these animals use aa browse in wioter, yet we see no documentetion of any studies to determine these food habits.

2. Grass end Forb Reestablishment.

 What evidence does the company have that grasses and forbe planted on these areas will not outcompete the shrubs, preventing shrub establishment?

 What were the reasons for selecting these species of grassee and forbs? Antelope are browsers for most of the yesr, though they do use grasses and forbs in spriog end summer. Are these species whose use by antelope has been documented?

P.3 How soon is topsoil going to be replaced on-aite? "As soon ee poseible" is too verieble e time period. If the company wae eerioue about re-establishment of native vegetetion, they would have checked with companies now mining eod found that topsoil canoot be stored longer than three years if good reestablishment of native vegetetion ie expected. The sooner topsoil is repleced, the better. Some maximum time should be specified.

P.3-C Fencing.

What happens to big game if areae are fenced.from use in wioter? What happens to other vegetation on the mineeite if fenced areas are unusable,

forcing wildlife sod livestock to overuse remaining vegetation? Will 2-5 years of fenciog allow vegetation to become vigorous enough to withstand grazing?

P.3-D Topogrsphy.

"Have maximum portion of reclaimed area svsilsble to antelope during severe weather." What does thia mean? "Restore topogrsphy as closely as is feasible to original cootours." This should read "Restore topogrsphy to original contours." As we have pointed out many times, the reason this area is good winter range is the fact that it is windswept, thus relstively snowfree end svsilsble to antelope. As a result, it is absolutely esseotial that the topography be restored.

P.3 11 Mine impact reduction snd mitigation.

A. Habitat enhancement - How will the quality of the summer range be improved? Will this involve incressing the quantity end variety of forbs on the summer range? Does the company know yet where the summer raoge for antelope using Red Rim is located? They did not agree with our locations of most of the seasonal ranges, but we don't believe they know where the animals spend their time. How many animals use the Red Rim aree in summer? Is there a lack of water on Red Rim? If not, how will creation of impoundments at least two miles from critical winter renges attract animals awey from forage needed in winter? Is the problem with winter forage one of overuse in summer, or one of availability because of snow depth?

 Is there documentation for the statement thet antelope prefer forbs? Where is the documentation for the statement thet fertilizetion will increase the amount of forbs and decrease use of browse plants?

p.4-B Improve available winter range quality.

The objective here is to iocreaee the carrying capacity of wioter renges not disturbed by mining. What ie the preseot carryiog capacity? Haa the company attempted to determine this? What effect doee winter severity have on the carrying capecity? Which winter renges will oot be disturbed by mining? Our impression was that all of the critical winter range was going to be disturbed.

Where is the documentation for the implicstion that fertilizing winter rengee will increase production and paletability of forage on the winter range? Whet effect will verying snow petterns have oo the company'e ebility to concentrate enimals on "uodieturbed" winter rangee end away from affected ereas?

P.4-C Improve accessibility of winter ranges.

Who will plow snow to make trails to unused wintering areas? Where are these "unused" wintering areas? How can we be certain that animals following these trails to "unused" wintering areas will not be trapped by subsequent storms? We suspect that these winter ranges, if unused, are not really winter ranges.

P.45-D

We object to supplemental feeding as a mitigation measure for antelope affected by mining. This Department has experienced little success with antelope winter feeding operations. Where will the leaves and leaders of native browse plants come from? Will plants be removed elsewhere to provide these?

P.5-3 Mine personnel management.

This should include termination of employees for poaching.

P.5-F Maintain sage grouse breeding areas.

This should include moving all sage grouse strutting grounds, not just those considered "important." If suitable winter ranges are not maintained, the presence of strutting grounds will make no difference. Have winter ranges for sage grouse using Red Rim been located? Our data suggest that the majority of the important sage grouse winter ranges in this area are on Red Rim and the Cherokee Coal Lease to the west.

This proposal has no references providing corroborative research to document the effectiveness of techniques proposed. It is extremely speculative, with no basis in fact. It certainly does nothing to alleviate our feara that mining will simply eliminate the wildlife and wildlife habitat on Red Rim-China Butte.

If we may be of further help on this project please feel free to contact us.

Sincerely,

W. DONALD DEXTER, ASSISTANT DIRECTOR
WYOMING GAME AND FISH DEPARTMENT

WDD:mlr

cc: Game Div.
Fish Div.
file 237

THE STATE OF WYOMING

ED HERSCHLER
GOVERNOR

Game and Fish Department

CHEYENNE, WYOMING 82002

EARL M. THOMAS
DIRECTOR

March 28, 1980

Dick Hartman
State Planning Coordinator
2320 Capitol Avenue
Cheyenne, WY 82002

Attention: Warren White

Dear Warren:

This document, at least for Wyoming, can in no way be considered a detailed analysis of the cumulative impacts of coal development in the Green River-Hams Fork Coal region (GR-HF). There is no consideration for other coal development in the GR-HF region, there are no data for wildlife losses in Wyoming, and there are no data for impacts to wildlife associated recreation. These deficiencies are even more significant since data regarding wildlife on the five lease sites have been made available to the BLM. These data include densities of game mammals, game birds, non-game birds, extensive data on raptors and data on endangered species. Information on wildlife recreation and the associated economic benefits to the State of Wyoming are entirely ignored. In addition to the lack of impact analysis, the document effectively provides only two alternatives for Wyoming, total leasing or no leasing.

What little analysis done in Wyoming used almost one-quarter of the state as a unit (region) for analysis. The analysis in Colorado was based on Data Analysis Units (DAUs) and thus the regional impacts appear more significant in that state. Wyoming also has DAUs.

A major assumption of this document is that major impacts will occur without leasing federal coal. However, at least in the checkerboard lands of Wyoming, a decision not to lease federal coal would prevent development of private coal and thus prevent impacts associated with this development.

The following are specific comments:

P. 2-16 Threatened and Endangered Species - can be evaluated. Data have been available since USFWS surveyed Hanna area in 1979. There

were three ferret skulls found in this area yet there is no mention of it here. Any coal lease granted, regardless of the USFWS opinion, should have to extensively survey the prairie dog towns on-site, every year, preferably.

P. 2-23 - The statement that losses of antelope and sage grouse are not significant regionally are misleading because of the vast region used in this analysis. The following losses will occur and they are significant:

Lease	Animals Affected	Animals Lost	Percent of Local Pop.	Percent of DAU
Red Rim & China Butte				
Antelope	2,500	1,600	64%	34%
Mule Deer	450	338	75%	5%
Sage Grouse	3,200	2,400	75%	75%
Raptors - Numerous nesting sites may be destroyed. Data have been provided to the BLM.				
Hanna Leases				
Antelope		195		
Mule Deer		23		
Sage Grouse		250		
Raptors - Numerous nesting sites may be destroyed. Data have been provided to the BLM.				

P. 2-32, Para. 5 - "...significant animal losses would occur, but numbers would still maintain the current stable or incrreasing regional trend over the longterm." This is incorrect.

P. 2-42, Para. 6 - "...significant animal losses would occur, but numbers would still maintain the current stable or increasing regional trend over the longterm." This is incorrect.

P. 2-52, Para. 6 - "...significant animal losses would occur, but numbers would still maintain the current stable or increasing regional trend over the longterm." This is incorrect.

P.2-63, Para. 7 - "...significant animal losses would occur, but numbers would still maintain the current stable or increasing regional trend over the longterm." This is incorrect.

Apparently, any amount of development will not affect wildlife in Wyoming! There is no mention anywhere here of numbers of animals lost or numbers of acres of various habitats lost.

Chapter 3-

Pages 3-4 - There is no mention of wildlife associated recreation, number of days of hunting and fishing, and economic value. This should be calculated for the life of the mines; value lost due to mining should be calculated.

P. 3-13, Table 3-6 - Sage grouse are also high interest species in Wyoming, as well as economically valuable.

P. 3-14 - Pinyon-juniper, at least juniper, in Wyoming, has high value as deer winter range. For wildlife, saltbush and greaswood are more valuable than grassland. Rock outcrops are valuable nesting habitat for raptors.

The document is full of pro-development economics, but with little detail on wildlife, economic value of wildlife and recreation. People impacts on recreation, loss of habitat to subdivisions, roads, trains, etc. have to be considered. These are all indirect impacts of coal development.

P. 4-8, Table 4-3 - Exactly what is the impact in this arid region due to loss of 19 water sources and impacts on 9 more?

P. 4-34, Para. 3 - "...information is not available to predict the time needed for native species invasion or the extent of acres unable to be revegetated." The summary section says 20-50 years for reclamation, and 5-10% of the area is not suitable for reclamation.

P. 4-35 - "At this time there isn't any committed mitigation that would reduce or eliminate these impacts to vegetation." Then, some mitigation measures should be included.

P. 4-46, Table 4-19 - This table indicates that all impacts will be severe without federal leasing, and the entire leasing program will increase losses only 10%. This is incorrect.

P. 4-47, Table 4-20 - We disagree that impacts will be minor. Minor in relation to what? This analysis should be based on herd units, not the whole region. The region here is 1/4 of the state!

P. 4-56, Table 4-24 - Demand for recreation has to be separated by state, not calculated by region. Increase hunting fees will do nothing additional to nonresident hunting participation. We limited participation years ago when we limited licenses. To blame the loss of recreation resulting from mining on higher license fees and increased fuel costs is totally inappropriate and incorrect.

P. 4-61 - For several years now, the Wyoming DEQ has not allowed simply planting grasses on mine sites. The stipulations on all areas leased for federal coal development should require speeding-up succession.

P. 4-124 - Economic loss section should include loss of inoome to the state from wildlife losses - after a realistic estimation of wildlife losses.

We realize these comments appear very negative. However, the quality of this document precluded a positive approach to our review.

Sincerely,

W. DONALD DEXTER
ASSISTANT DIRECTOR-OPERATIONS

cc: Robert H. Shields, Area Manager
U.S. Fish and Wildlife Service
Salt Lake City, UT 84138

Game Division

WDD:DS:ag

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THE STATE OF WYOMING

ED HERSCHLER
GOVERNOR

Department of Economic Planning and Development

BARRETT BUILDING CHEYENNE, WYOMING 82002 PHONE (307) 777-7284

JOHN NILAND
EXECUTIVE DIRECTOR

MEMORANDUM

TO: Warren White

FROM: Cindy Ogburn

DATE: July 8, 1980

SUBJ: Green River-Hams Fork Part I and II, 80-124

We agree with the sociological, economic and psychological impacts that the Green River-Hams Fork projects will cause. However, far more detailed plans must be developed than are put forth in this EIS.

Under propoaed solutions for environmental consequences, page 212, second column:

-The suggestion of solving local financing problems through State legialation by requiring counties and municipalities to share an sd valorem tax is not prscticsble. This is a political solution which would be difficult to achieve by start up time at the mines. Counties are not willing to share their revenuea with towns and cities.

-In the same paragraph, the suggestion is made that power plsnts exemption from property taxes be removed. In Wyoming, there are no exemptions to be removed. We do not know about Colorado.

Last paragraph:

-Federal snd stste aid programs are available to supplement local financing. However, only FmHA '601' is specifically for energy impacted sress. Other monies could be used for these locations, but that would eliminate or lessen consideraably the funds available for other equally needy, but unimpacted, towna and cities in Wyoming.

Page 213, first column, second paragraph:

-It is indeed an excellent idea to attract various other types of industry to the proposed impacted areas. However, what industries would be enticed to locate in Dixon or Wamsutter or Baggs or Elk Mountain? Even with a population influx, theae people will be mining, leaving women and children as the remaining work force. Second, distribution and marketing of products from these areas would be difficult at best. Third, these are ranching communities and have been for over a hundred years. It seems doubtful that these ranches would sell prime grazing land so that alternative industries could construct facilities.

Page 221, second column, eighth paragraph:

-Existing urban areas available for expansion, rather than using ranch landa, are Rawlins and Rock Springs. These cities are already suffering from lack of housing and over population. In the case of Dixon, there is a commuting distance of over 150 milea round trip and Wamsutter, over 140 miles from Rawlins and 80 miles from Rock Springs. This does not appear to be much of a solution.

Page 222, first column, first paragraph:

-Here again we are taking funds from other municipalities in the state. These areas will suffer because other towns are being impacted.

Page 270, 271, 272, Per Capita Projections of Operating Revenues and Bonding Capacitiea:

-These figures appear to be total bonding capacity, not per capita bonding capacity.

We suggest that the authors of this EIS seriously review and revise their data and develop practicable solutions and conclusions to the sociological, economic and psychological sections of the Hams Fork-Green River EIS.

JUN 26 1980 44

THE STATE OF WYOMING

ED HERSCHLER
GOVERNOR

State Engineer's Office

BARRETT BUILDING CHEYENNE, WYOMING 82002

June 26, 1980

M E M O R A N D U M

TO: Dick Hartman, State Planning Coordinator

FROM: Louis E. Allen, Water Resources Engineer

SUBJECT: Green River - Hams Fork Draft EIS, Parts I & II
State Identifier No. 80-124

The subject DEIS was reviewed primarily for the water resources effects in Wyoming. There are insufficient details for the mining tracts to be very specific in commenting.

The main concern is where the expected additional 447 acre-feet/year of water for municipal use in the North Platte River Basin is to be obtained. There is no mention of the North Platte River Decree, or of State water laws.

Where wells or springs are expected to be destroyed or to experience interference, the only remark is that these could be replaced by wells drilled deeper than the original ones. Wyoming law requires they be replaced, or the owner compensated, if the owner so desires.

In Part II, the water resources are not addressed for the Medicine Bow and Seminoe II LMU's.

The proposed underground mines, Bell Rock and Empire, in Colorado, would apparently experience subsidence during or following mining. The potential for fires is not addressed, and may be very real where subsidence occurs. I suggest reference to U.S.G.S. Professional Paper 1164, Dunrud and Osterwald, 1980. This was not available during the DEIS preparation, but should be considered in future evaluations.

LEA/ht
CC: George L. Christopulos
State Engineer

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THE STATE OF WYOMING

Ed Herschler, Governor
Lera Monghini, Superintendent and Chief Engineer

Wyoming State Highway Department

P. O. BOX 1708 CHEYENNE, WYOMING 82001

May 21, 1980

Green River-Hams Fork
Draft E.I.S. Coal
Part I and II
State Identifier 80-124

State Planning Coordinator
Wyoming State Clearinghouse
2320 Capitol Avenue
Cheyenne, Wyoming 82002

Gentlemen:

The above referenced Environmental Impact Statement has been reviewed in this office with the following comments concerning transportation. Comments were made on April 7, 1980 concerning the first draft copy of this Environmental Impact Statement. These comments are attached as they are the same for this draft Environmental Impact Statement. Item No. 1 should now refer to Page 98 of Part I and item No. 2 should now refer to Pages 215-218 Part I. Item 3 is still effective.

Very truly yours,

William P King

William P. King, P.E.
Environmental Services Engineer

WPK/FKS:lt
Attachment (2)

THE STATE OF WYOMING

Ed Herschler, Governor
Lera Monghini, Superintendent and Chief Engineer

Wyoming State Highway Department

P. O. BOX 1708 CHEYENNE, WYOMING 82001

April 7, 1980

COPY

Mr. Warren G. White
Principal Analyst
Wyoming State Clearinghouse
2320 Capitol Avenue
Cheyenne, Wyoming 82001

Environment General
Green River-Hams Fork Regional
Coal Leasing E.I.S.

COPY

Dear Mr. White:

We have reviewed the first draft copy of the Green River-Hams Fork Regional Coal Leasing Environmental Impact Statement and offer the following comments concerning transportation.

Pg 98 Part I

1. ~~Chapter 3, Pages 3/36-3/41~~.

 a) The data presented here is in substantial agreement with our data.

 b) We suggest that traffic characteristics could be better understood in terms of volumes, operating speeds, congestion, and hindrances rather than "capacity" theory. Few people other than traffic engineers understand capacity.

 c) While there are no at-grade crossings of State highways and the Union Pacific main line in Carbon and Sweetwater Counties, there are at-grade crossings in the other counties along the Union Pacific main line. Further, it is our opinion that rail traffic will impact the entire main line; and discussion must address rail traffic on a statewide basis rather than limiting discussion to Carbon and Sweetwater Counties.

 d) As far as Wyoming is concerned, grade separations are not justified on a hazard rating basis. The hazard rating is a means to prioritize crossings for prudent expenditure of limited funds. Justification is based on many factors with public opinions and attitudes being very important.

Statement on pg 98 in error

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Mr. Warren G. White
April 7, 1980
Page 2

Pg 215-218 Part I

2. ~~Chapter 4, Pages 4/104-4/120~~

 a) It appears that the basis for determining road impact is when service volumes exceed those that will permit the road segment to operate at Service Level C. We do not agree with this basis. We feel that the basis for impact is whether the increased traffic will produce service volumes that exceed those for the service level the road was designed to provide. The road segments in Wyoming were designed to provide a Service Level B.

 In many cases, however, the significance of the impact will be the shortened time frame in which the service volume is exceeded.

 b) Hazard ratings should not be used to determine whether or not railroad/highway grade separations are warranted in Wyoming.

 c) Not mentioned is the proposed link between the Union Pacific and Chicago and Northwestern Railroads which would provide the Union Pacific with access to the Powder River Basin. This could have a dramatic impact on rail traffic along the Union Pacific.

3. Summary

We would agree that the effects on the State Highway System are not likely to be significant in Carbon and Sweetwater Counties. However, the cumulative effect of increased rail traffic with respect to at-grade crossings along the entire main line of the Union Pacific in Wyoming needs to be analyzed in depth.

Sincerely,

William P King

William P. King, P. E.
Environmental Services Engineer

WPK:lt

COPY

COLORADO WEST AREA
council of governments

RIO BLANCO MOFFAT MESA GARFIELD

July 8, 1980

EIS Team Leader
Buresu of Land Mansgement
Craig District Office
P.O. Box 248 - 455 Emerson St.
Craig, CO 81625

Desr Sir:

Enclosed please find CWACOG staff comments on the Draft Environmental Impact Statement for the Green River - Hams Fork coal leasing program.

The CWACOG also endorses the comments submitted by the Rio Blanco and Moffat County Planning Departments.

We are hopeful that the Final Environmental Impact Statement will reflect the local concerns that we have raised and that committed mitigation for social, economic and fiscal impacts will be strengthened.

Sincerely,

Bob Demos

Robert G. Demos
Executive Director, CWACOG

RGD:pl

cc: Moffat County Planning Dept.
Rio Blanco County Planning Dept.
CWACOG Board Members

BOX 351 RIFLE, COLORADO 81650 TELEPHONE 303-625-1723

CWACOG STAFF
COMMENTS ON GREEN RIVER - HAMS FORK
DRAFT ENVIRONMENTAL IMPACT STATEMENT

The CWACOG would like to expreas concerns it has with the propoaed federel coel leasing in the Green River-Hams Fork area of Wyoming and Colorado. We heve several proposed suggeations for incorporstion into the Draft EIS. If these suggeations are incorporated into the Final EIS its effectivenees in the impact mitigation proceas will be significantly enhanced.

The CWACOG is concerned thet the new coal leasing being proposed, as well es other developments propoaed for BLM lands, is taking plece without edequate knowledge of the aequence of development of vsrious tracts. Thia aort of ceae by ceas decieion making leavea locel planning efforts unable to reapond to the totel or cumuletivs impscts of ovsrall development. The CWACOG would like to take thia opportunity to call upon DOI/BLM to eatablish s time frame for development of a Reaource Management Plan as it haa been mandated by the FLPMA. Although e Dreft or Final EIS is not the place to develop an RMP within, it would be helpful to know how thia Draft EIS fits in with an overall minerel development/ leasing plan.

With regard to the aubatance of the Drsft EIS, it is our perception that several inadequacies and erroneous assumptions and concluaions ere preaent.

The firat deficiency in the draft relatea to current or projected coal production estimatea. Table 2-2 projects coal production in 1987 without new fedaral leasing in Colorado at 27.34 million tons. No source ie attributed or explanation offered as to how this figure was arrived at; however, it appeers to have been derived from the Northwest Colorado Cosl Supplement published in 1976. Thia level of production by 1987 is then aasumed, for purposes of thia Dreft EIS, to be the "No-Action", or bsaeline level for purpoaes of impact analysis of the proposed federsl coal leasing. Theae projected production levels are now four years old and sre in need of updating. Such updatea of projected production ahould be obtained from the companies themselves, where posaible, based on current and projected productions. If current and projected production estimatea are now lower, then the impact analysis in the Draft EIS is underatated as it will require much greater reaources to reach the levels of production anticipated in the Draft EIS. If current and projected production eatimatea are now higher than what was anticipsted in the Northweat Colorado Coal Supplement, then the cumulative effects of new leesing are alao underatated.

The aecond deficiency of the Draft EIS is that it is limited to snalysie of effects on local communities reaulting only from theae proposed leases. It recognizes no other existing or future impact that northweat Colorado counties and communities face with respect to oil shale development, power plant conatruction, oil and gas production, uranium development, or coal gasification/liquification. Rather, the Draft EIS is written as if the proposed leasing is the only imminent impsctor of northweat Colorado.

Another point of concern which requires attention relstes to local financiel capabilities. The diacuasion on local financea (p.87) is admitted in the narrative to be inadequate. The aite-apecific aummaries in Part II are mialeading since in no section are short and long term needs for community facilities eggregsted for each proposed alternative. The significance of anticipsted impact is, therefore, difficult to analyze due to thia and due to the lack of explanation regarding the aasumptions used. A prime example of deficiencies in facility analyeis is waste treatment facilities. Deapite statements to the contrary, sewage will be e

Section 8 allocations, eta. The central fact is, there will be e capitel ehortfall for financing of facilities and services which will not be adequately eddressed by any available program. No committed mitigation measure adequately eddresses thia eituation. As such, inadequate services may result end sociel and economic breakdown will be accelerated unless concerted steps which are not identified or committed are taken.

Housing, of course, is an issue of critical concern not only to local governments, but to companies which may bid on eny leases subsequently made aveileble. Figure 3-4 and p. 91 and 92 are inadequate to deacribe the impact on housing or to serve as a baseline deacription. Crucial to a baseline deacription ie information on pre-boom, present snd future costs of houeing, end projected bousing coats vis-a-vis an income projection and enalysis for incoming basic and non-basic workers. Estimatss of the number of sssisted housing units necessary to prevent displacement of the elderly and low/moderate income residents is also necessary for development and implementation of a housing stretegy.

A lack of understanding of boomtowns is demonstrated on page 204, second paragraph, where it somewhst confusedly states: "The communities, on the other hand, would come out ahead since their costs needed for capital inveatments would be reduced by more than their bonding capacities." This statement comes in light of numerous other references in the text to revenue gaps and deficits for public facilities. It ignores the tax lead time problem, tbe fact that the property tax is highly inelastic, and that the projected dependence on mobile homes will have a severely detrimental effect on assessed veluation.

Another example of lack of understanding of boomtown dynamics is found on page 206 where it is stated: "We can say with confidence that the various leasing alternatives will affect the community structures and the lives of individual citizens proportionately to population growth rates." This is simply untrue. Numerous studies of boomtowns have demonstrated exactly the opposite; social snd economic strains do not occur proportional to populetion growth but far exceed it st an exponential rate.

In the analysis of different communities, nowhere is any mention made of Maybell and effects which may occur there. Maybell, although unincorporeted, does exist as a residential area and should be included in any impect enalysis in terms of its ability or inability to accomodate certain projected levels of growth.

Two solutions to the above noted problems are contained in the Draft EIS itself. However, these solutions are not identified as committed mitigation measures. Therefore there is no assursnce at present that they will be implemented.

The first solution is the development of an RMP (p. 212). This would go a long way toward reducing the uncertainty that is now hindering local planning efforts.

The second solution is to include lease stipulations that would require compeny contributions towards locel impact mitigation. Leases granted must require adequate bousing for the primary and secondary labor force. These provisions should, et e minimum, be a stipulation of the leasee. Leases should additionally include a provision requiring compliance with local permits end ordinances.

eignificent impect, not only because of water quality degradetion but also due to finenciel burden in Craig, Meeker and other communities. The EIS frequently stetes thet sewage effluent dischergea will be minimized by NPDES requirements; however, it should be noted that municipalities can meet effluent limitations only if the sewage fecility cepecity end deaign are adequate to accommodate the populetion involved. Increase in populetion due to coal mining activities in Moffet County ere necessitating expanded waste treatment, at considerable expense to impected communities, in order to meet state health standards and NPDES limits. This, in turn, is creeting both short and long term environmental end financiel impacts for several reasons:

1) The plenning, constructions and financing of a new or expanded sewage fecility require several years to complete, creating a coneidereble lag time between the time thst the treatment problem erieee and when it is solved. Due to shortages of funding, the Environmental Protection Agency will not award grants for facility improvements unless an exiating aignificant problem can be documented.

2) Federel funding for the planning and construction of sewage fecilities has been reduced each yesr so that even non-compliance fecilitiee in Colorado may not be funded within the next several yeers.

3) Sewage fecilities usually represent a large, long-term capital coat to municipalities, even if federal grant assistance is available.

4) Since plants are deaigned and built to accommodate projected 10 to 20 yeer growth, most communities are unable to finance a facility without major grant ssaistance because of inadequate tax base and bonding capabilities until the projected growth actually occurs.

This constitutes e major financial problem for local governments in Moffet County, end particulerly for Craig where waste treatment problems elready exiet. We feel that ths plan fails to adequately asaess this and other cepitel facility impacts and should provide additional analysis under eech elternative.

With regard to fiscel revenues, it is briefly recognized that the increased tax base will not occur where the social, residential, and economic impacts ers to occur - in the incorporated areas. The shopping list of federal programs in Section 4 is then referred to as the means to overcome the mismatches with the csveat that "...none of these sources are automatically aveileble, and all require that the community compete with simularly impacted communities..." Not only are Energy/Mineral Impact Assistance Fund competitive, gensrally they are not made available in amounts of over $200,000. The othsr federal programs listed were not evaluated with respect to current levels of funding, past use, and relevance to rural energy impacted sreas. The shopping list is thus misleading as an indicator of available federal assistence. In the area of housing along, HUD Community Development allocations and competitive criterie that virtually prohibit participation by rural energy impected communities are not recognized, not to mention underallocations of essisted housing programs such as Section 8, HUD 202, FmHA 515/

We sincerely bope that DOI/BLM takes these comments into consideration end incorporates them in the Final EIS. Committed mitigetion must be strengthened. If it requires additional lease requirements, these should be defined in the Draft EIS or the Final EIS and implemented through the leasing progrsm.

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RIO BLANCO COUNTY DEPARTMENT OF DEVELOPMENT

Rio Blanco County Courthouse
Post Office Box 599
Meeker, CO 81641
(303) 878-5091

8 July 1980

EIS Team Leader
U.S. Dept. of the Interior
Bureau of Land Management
Craig District Office
Box 248
Craig, CO 81625

Certified Number
P03 8244550

Sir:

The Rio Blanco County Board of County Commissioners have directed me to write this letter in their behalf for the purpose of sharing their concerns with the Green River-Hamsfork Draft Environmental Impact Statement on coal. Our comments will probably be considered general as they are not page or line specific as they cannot be as our concerns are not with what the report contains but rather with what it does not contain!

Our first concern is that the draft report should contain stipulations that require the leasee to comply with State and Local ordinances. We believe that this kind of cooperation exists not only as a practical everyday working matter, but officially through a Memorandum of Understanding which has been in effect for several years between The Colorado State BLM Director and The Rio Blanco County Board of County Commissioners. Therefore, these requirements should be stated in the report.

Secondly, it is the position of Rio Blanco County that socio-economic lease stipulations should be included that mitigate the effects being caused by new leased tracts. The location of new leased tracts and the rate of its development should be keyed to the capacity of communities to absorb growth from cumulative sources. Development should be scheduled to the expansion capacity of a community at any given time or to the services and housing the leasees will provide over and above the communities present capacity. We feel very strongly that if there is ever to be a viable Energy Industry in the West, these are the kinds of stipulations that must be attached. This is not a new idea, for responsible energy companies that have been successful in rapid growth areas are already familiar with these requirements. It is just that it has not yet been a requirement and some companies will cooperate and others will not, and when a company choses not to cooperate the community becomes the loser.

Finally, Rio Blanco County endorses the statement submitted to you by the Colorado West Area Council of Governments and requests that the CWACOG statement be made a part of our own.

Sincerely,

Duane L. Rehborg
Rio Blanco County
Impact Coordinator

DLR:tda

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National Wildlife Federation

NATURAL RESOURCE CLINIC
FLEMING LAW BUILDING
BOULDER, COLORADO 80309
303/492-8552

July 7, 1980

Mr. Dan Martin
Bureau of Land Management
Craig District Office
P.O. Box 248
455 Emerson Street
Craig, CO 81625

Re: Green River-Hams Fork Coal Leasing DEIS

Dear Mr. Martin:

We transmit as an enclosure comments submitted on behalf of the National Wildlife Federation, the Colorado Wildlife Federation, the Wyoming Wildlife Federation and the Public Lands Institute on the captioned Draft Environmental Impact Statement. These comments were prepared by Ms. Cass Haug, legal intern in this office, based on a careful study of the DEIS and conversations with various folks in Colorado and Wyoming familiar with the Green River-Hams Fork region, the environmental amenities therein, and BLM's proposal for coal leasing. Our position, summarized briefly, is this.

The amount of leasing proposed by the Secretary of Interior is excessive. The result will be to cause serious damage to important wildlife values, particularly critical winter range for elk, deer and pronghorn antelope, and to valuable alluvial valley floor areas.

While the Federal Coal Management Program regulations strive to assure an optimal balance between economically important (and efficient) coal development and sensible environmental protection, that goal seems not to have been attained--at least so far. The regulations have, in three important respects, not been conscientiously adhered to: first, the regional production goal has been set without true regard for collateral supplies within the Green River-Hams Fork region (e.g., from production under preference right leases), nor with respect to current national needs. Secondly, important components of the land-use planning regulations--particularly, those calling for the use of "best available data" and the designation of areas of critical environmental concern within the planning unit were not given proper

homage. Finally, the land unsuitability criteria prescribed in BLM regulations were not faithfully applied.

Another major concern is that the DEIS has glaring deficiencies. Among other deficits to which Ms. Haug refers in the attached comments are the overestimation of current environmental disruption in the region, underestimation of adverse wildlife impacts resulting from the proposed program (particularly, in the event of a "worst case" scenario, where reclamation or restoration of the land is not achieved in this semi-arid region), overlooking of secondary impacts (especially those resulting from the creation of new transportation corridors), superficiality of site-specific analyses, and finally, failure to look at possible alternatives to the proposed leasing program, including (for example) the sequential leasing of tracts depending upon evolving needs.

The strong suggestion here is that more time be taken (we think the problems we have identified in both the DEIS and the proposed leasing decision may have resulted from a mysteriously motivated acceleration of effort that has left too little time for careful study and decisionmaking), and that the DEIS be supplemented, or if necessary, redrafted, using more current and reliable data, especially with respect to the land-use (management framework) plans.

These comments are submitted on behalf of, and reflect the interest of, the National Wildlife Federation (with over four million members and supporters, 25,000 of which are in Colorado), the Colorado Wildlife Federation (with approximately 2,000 members in the State of Colorado), and the Wyoming Wildlife Federation (with approximately 1,500 members in that state). They are also submitted on behalf of the Public Lands Institute.

Sincerely,

Robert J. Golten

Robert J. Golten
Counsel

dh

Enclosure

On behalf of the National Wildlife Federation, the Wyoming Wildlife Federation, the Colorado Wildlife Federation, and the Public Lands Institute, I am pleased to submit the following comments on the Green River-Hams Fork coal leasing DEIS.

I. Introduction--Goals of Federal Coal Management Program Not Achieved.

The Federal Coal Management Program (FCMP) was designed to reach several goals, two of which we are primarily concerned with. The first of these is "to establish policies and procedures for considering development of coal deposits through a leasing system involving land-use planning and environmental assessment processes." The second is to "insure that an adequate supply of federal coal is developed efficiently in compliance with laws, planning processes, and other safeguards designed to protect society and the environment." (44 Fed. Reg. § 3420.0-2, July 19, 1979).

It is our position that these goals have not been achieved in the Green River-Hams Fork leasing process. The result is an unacceptable level of adverse impacts on wildlife habitat and eventually on wildlife population, and the likelihood of sacrifice of valuable farmland, specifically alluvial valley floors. The reason for this failure is that the FCMP regulations have not been strictly followed, due to a combination of an accelerated lease schedule (and the resulting necessity to forego development and/or application of certain procedures) and the inadequate application of established steps in the process.

II. Environmental Concerns.

A. Adverse Impact on Wildlife and Wildlife Habitat.

1. Impacts on Big Game Habitat.

The most serious disruption of wildlife habitat that will arise as a result of the proposed action is that of big game critical winter range. At least nine of the tracts include critical winter range for muledeer, four include critical winter range for elk, and three for pronghorn antelope. There may be an even greater occurrence of winter range than this, as some of the site-specific analyses are unclear as to whether range is present on the tract. As stated in the DEIS (p. 190) loss of range will bring about eventual herd population declines. Other winter ranges in the region are near capacity and cannot support displaced herds. Up to one-sixth of the Red Rim herd of pronghorn antelope may die in a severe winter as a result of displacement. Several migration routes as well as at least one calving area also exist on the proposed lease tracts.

2. Impacts on Sage Grouse Habitat.

Serious adverse impacts will occur on sage grouse habitat in both Colorado and Wyoming. The DEIS (p. 190) states that local populations will decline substantially, particularly where strutting/nesting complexes are impacted. These complexes exist on at least six of the sixteen tracts, and several will be completely destroyed by the mining operation.

3. Other Wildlife Impacts.

Other wildlife habitats adversely impacted include areas important for raptors, the disruption of at least two bald eagle high-use areas (Iles Mountain and Bell Rock tracts) and the loss of riparian habitat which is crucial for many smaller species. There is also the possibility of impacts on black-footed ferret on several of the Wyoming tracts. Although the DEIS has dismissed the data indicating the presence of black-footed ferrets, there is at least sufficient likelihood of their existence, based on Fish & Wildlife Service survey, to require strict stipulations in the mining leases for monitoring and removal if individual animals are found.

4. Effects on Wildlife Habitat Due to Failure of Reclamation.

The above adverse impacts are magnified when consideration is extended beyond the immediate impacts to include the additional effects created by the possible failure of reclamation, which would make at least some of these impacts permanent. Several characteristics of the tracts indicate the great difficulty that will be involved in restoring the surface. All of the tracts are found in a semi-arid region. There will be adverse impacts on the soils as a result of mining; decreased permeability and filtration rates and decreases in soil microbiota, which contribute to soil fertility. Wind erosion rates are moderate to high, and water erosion rates vary, all aggrevated by the existence of steep slopes. (In one tract as much as 75% of the slopes have a grade of 25% or greater.) Because of alterations in the microbiota of the soil the vegetation eventually reestablished is likely to be of a different type than that originally inhabiting the tract, which may result in permanent losses of winter range and habitat. All of the tracts evaluated in the DEIS for reclamation potential were rated "low." Of those tracts not evaluated for overall reclamation potential most have soils with a very high percentage (80-90%) of low reclamation potential. Nor do these figures make the distinction between reclamation (returning the land to a usable state) as opposed to restoration (returning the land to its previous use). Must of the discussion in the DEIS suggests the high likelihood of failure of reclamation. As restoration to original use will be even more difficult to achieve, it suggests an even bleaker picture, aggrevating the impacts on wildife discussed above.

B. Loss of Alluvial Valley Floors.

An additional environmental concern arises as a result of the potential loss of alluvial valley floors due to the proposed mining. At least 13 of the 16 proposed lease sites seem to be likely locations for alluvial valley floors. The likelihood that these areas will be adversely impacted, if not destroyed, appears high.

These environmental concerns were not given sufficient weight in the land-use process (as will be further discussed below). The predicted adverse impacts are serious enough to effect the decisions concerning which of the least tracts should be mined. We believe the choice of tracts needs to be reevaluated and greater consideration given to adverse environmental consequences and possible mitigation measures.

III. Legal Concerns.

A. Federal Coal Management Program Regulations Have Not Been Followed in the Leasing Process.

1. The Production Goal and Leasing Target.

The regional leasing target for 1983 has been set by the Secretary of Interior at 520 million tons. We believe that target reflects an unrealistically high assessment of the amount of coal that needs to be extracted from the area. This conclusion is based on the failure of the Secretary and of the Department of Energy to consider all factors determined to be relevant by the FCMP regulations.

44 Fed. Reg. § 3420.3-2, July 19, 1979, establishes the procedure for setting production goals and leasing targets. Subsection (1) of that section allows the Secretary to ignore those provisions in setting regional leasing targets for 1981 or 1982, if he relies instead on the analysis in the final environmental statement on the FCMP, and related analyses. From the description in the DEIS (p. 5) it appears that neither of these alternatives was followed. According to that description, the calculations of leasing target reflected both new information, and the application of new means of achieving the production goals (i.e., increasing the total leasing target by 25% to encourage competition, etc.). Several rather extreme fluctuations in the leasing target amount made within the year after issuance of the final environmental statement on the FCMP also indicate that new considerations were being relied upon. Another indication that the Secretary was not relying on the FCMP FES is found in his failure to consider preference rights lease agreements in setting the leasing target, as estimates of their production potential were made in the FES (Abstract, p. 2-27) and should have been considered in setting the leasing target if that document is the basis of his decision. These factors establish that the Secretary was not relying on the FCMP FES and related studies, but on new information and new means of insuring the production goal would be satisfied. It is our position that he must therefore follow

the procedures described in the FCMP regulations for setting the leasing target.

Furthermore, subsection (1) does not exempt the Department of Energy from following the regulations and setting the regional production goals for leasing in 1981 and 1982. Therefore, our comments will be directed toward the failure of both the Secretary of Interior and the Department of Energy to follow these regulations. One factor apparently to be considered by the Department of Energy in setting regional production goals (the basis of the leasing target) is the "national need for coal resources balanced against the environmental consequences of developing these resources." (44 Fed. Reg. § 3420.3-2(b)(3), July 19, 1979). One measurement of a national need for coal resources is the electricity power annual growth rate, the most critical ingredient in determining production goals. There is some doubt however about the accuracy of the annual growth rate assumed by DOE in this case. The rate used by DOE was 4.8% per year through 1985 and 4.0% in 1990 (see Federal Coal Leasing in 1985 and 1990 Regional Coal Production Forecasts, Leasing Policy Development Office, DOE, June 1978, p. 89 Midrange Scenario). Most recent estimates however, including some by DOE, indicate a much lower electricity growth rate of either 1.9% or 2.1% (DOI/EIA-0010(79) Energy Data Report, released for printing May 14, 1980, EIA Annual Report on Monthly Comparison of Peak Load Demand and Energy for Load--1976-1979; DOE/EIA-0049(79) Energy Data Report, released for printing May 14, 1980, Preliminary Power Production, Fuel Consumption and Installed Capacity Data for 1979, respectively). Although any projection is of course speculative the annual energy growth rate has been consistently dropping since 1971, and the Department of Energy has offered no reason for predicting an increase in that rate in calculating the production target.

Nor did DOE apparently consider in its projection the recent slow-down in the Western coal market or the existence of 100 million tons of excess Western coal capacity (per interview with Guy Martin, Assistant Secretary of Interior, April 5, 1980) both of which also indicate a reduction in national need.

Whether or not the DOE interprets the regulations as requiring its compliance in this initial leasing procedure, the fact is that it did base its production goal on an estimate of "national need for coal resources" that we do not believe is accurate. To qualify as a legally valid production goal, the amount set must reflect a true estimate of current and future national coal requirements. Even if the Secretary of Interior should take the position that the exception for compliance with the regulations (subsection (1)) extends so far as to exclude the DOE from compliance as well (due to the joint effort that goes into the setting of the production goal), accuracy of information relied in setting the goal is still a requirement.

Once production goals are set, the Secretary of Interior establishes preliminary and final leasing targets. 44 Fed. Reg. § 3420.3-e(2)(2), (July 19, 1979), requires that in setting the

regional leasing target "the Secretary shall evaluate at a minimum, the expected and potential production for existing coal leases; [and] non-competitive coal leases. . . ." Although the Secretary's decision apparently included some consideration of potential production from existing coal leases the estimated amount relied on in setting the target contemplates an unexplained recent reduction of one billion tons (contrast the DEIS, Vol. 2, p. 433, listing 16.2 billion tons as production potential with Federal Coal Management Report for Fiscal Year 1978, pp. 1-6, which lists 17.2 billion tons as the production potential under existing federal leases). The regulations also require that the leasing target shall "take into consideration the coal that would come into production as a result of federal leasing" (44 Fed. Reg. § 3420.3-2(e)(2)(iv), July 19, 1979). We interpret this section as requiring a consideration of potential leasing and production under PRLAs which was not done (DEIS, p. 10).

The result of the failure to follow the FCMP regulations was to set a regional production goal of questionable validity, which is now serving as the rationale for the choice of a preferred alternative. Our conclusion is that the target as established does not provide a valid legal basis for this choice.

One of the principal elements of the FCMP is comprehensive land-use planning which is to precede any leasing (44 Fed. Reg. § 3420.1-5(a), (July 19,1979), and the Federal Coal Leasing Amendments Act of 1976, 30 U.S.C. § 201 et seq.). Land-use planning is designed to be a screening process, to determine areas for coal production without unduly damaging agriculture, wildlife, recreation or other resources or resource uses.

a. Requirements of a Land-Use Plan.

The regulations establish certain requirements that the land-use plan must meet in order to serve as a basis for leasing. We are not satisfied that these have been met by the Management Framework Plan applied to the Green River-Hams Fork region.

44 Fed. Reg. § 3420.1-5(d) (July 19, 1979) allows the use of existing land-use plans if they are supplemented to conform to paragraph (c) of tbat regulation. The regulation specifically requires that an unsuitability assessment, surface owner consulation and assessment of the amount of recoverable coal be completed as supplementation if not contained in the original plan. These specific requirements are not enough to bring the plan into conformance with paragraph (c) however. That paragraph lists additional requirements that a land-use plan must meet in order to qualify as the basis for leasing. The position of the Bureau of Land Management is apparently that a plan is sufficient once supplemented by an unsuitability assessment and surface owner consultation, if it provides a "reasonable basis" for proceeding with the leasing program (44 Fed. Reg. 42589). It is our position that the requirements of the regulation must be complied with, and cannot be avoided by a finding of reasonableness

without them. In any event, we do not believe any plan would serve aa a reaaonable baaia for leaaing absent fulfillment of the requirements included in paragraph (c). Following ia a discuaaion of aome of thoae apecific requirementa.

One requirement under the regulation ia that critical environmental areas be identified. The discuaaion preceding the FCMP regulationa indicate that they are intended to incorporate requirements under FLPMA (43 U.S.C. § 1701 et aeq.). Section 202(c) (43 U.S.C. § 1712(c)) of that Act provides for application of areas of critical environmental concern which by definition are areas "within the public lands where apecial management attention is required to protect and prevent irreparable damage to important hiatoric, cultural or acenic valuea, fiah and wildlife resources or other natural syatems or proceaaea . . ." (43 U.S.C. § 1702(a)). Theae areaa are not aufficiently protected by the lands unsuitability criteria so as to nullify the requirement for identifying them. Proposed guidelines for the application of areas of critical environmental concern are available (44 Fed. Reg. § 32590, June 6, 1979) and final guidelinea, expected soon, can be applied upon iaauance. Green River-Hama Fork ia a region of many fragile wildlife habitata. Identification of critical environmental areas helpa to inaure the protection of theae habitata. If these areas have been identified during the land-use planning procedure that should be fully diacuaaed in the final EIS.

Another requirement particularly important in thia region is subaection (iv) of the regulation (44 Fed. Reg. § 3420.1-5 (c)(iv)) which requires that a land-use plan must "reflect available relevant data. . . ." Moat of the Management Framework Plans were developed in the late 1960s to early 1970s. The DEIS predicts a great deal of development in thia area, already having begun and accelerating in the near future. If the extent of the predicted impacts ia even a small part of what the DEIS indicates will occur, significant changes in the region will have affected the accuracy of the Management Framework Plan. Before it can serve as a baais for leaaing the MFP must be updated to reflect the current environmental situation in the region. There is no evidence in the DEIS that thia haa occurred. For example, the Supplement to the Williams Fork Management Framework Plan addresaes only the application of land unsuitability criteria and multiple use sustained yield resource decisions, and specifically mentions the lack of available data for a thorough application of the LUCs. We are aware of at least two studies, prepared by the Wyoming Department of Game & Fiah and the Wyoming Regional BLM office, which were available at the time of preparation of the DEIS but which were not included in that document. These studies were conducted over a 3-year period, and included intensive inventories of the region of the Wyoming leasing tracts (per conversation with Harry Hargu, Wyoming Department of Game & Fish). All available relevant data ahould be integrated into the MFP, and ita existence indicated in the DEIS, if not specifically included therein.

b. Land Unsuitability Criteria.

Another requirement for supplementation of the land-use plan is application of the land unauitability criteria (LUC) found in 44 Fed. Reg. Subpart 3461 (July 19, 1979). There aeema to have been aome confusion in the project aa far as when and by whom theae criteria are to be applied. BLM ia delegated the authority to apply the unsuitability criteria as part of the acreening proceaa in the land-use planning stage (SMCRA § 522, 30 U.S.C. § 1272(b) and 44 Fed. Reg. § 3420.2-3(c) (July 19, 1979)). (It ia clear that thia is a procedure aeparate from the Office of Surface Mining designation of unauitability upon petition.) Although BLM purports to have applied the unauitability criteria to the Green River-Hama Fork region (see supplement to the Williams Fork Management Framework Plan) we criticize the manner in which this waa accomplished. Firat, information found in the MFP relied upon may not be the "beat available data" as required in 44 Fed. Reg. § 42641 (July 19, 1979) as a basia for application of the LUCs. Secondly, there are some serious apparent omisaiona in the application of the criteria. Although the supplement atates that Criterion 10 (requiring a finding of unauitability of lands containing critical or essential habitat for atate listed threatened or endangered species) waa applied, this ia disputed by the Colorado Division of Wildlife (see comments of the CDW on the Green River-Hams Fork DEIS, p. 2). Nor was Criterion 15 (requiring a finding of unsuitability of areas eaaential for the maintenance of species of high state interest) adequately applied, in light of the high occurrence of big-game critical winter range, the existence of migration corridors on the lease tracts, as well as sage grouse strutting and nesting grounda.

44 Fed. Reg. § 3461.3-1(b)(i) (July 19, 1979) requires the authorized officer to "make every effort within the time and resources available to collect adequate and reliable data which would permit the application of Criterion 19 in the land-use or activity planning proceas." That criterion requires a finding of unsuitability if an alluvial valley floor is found on the tract, or would be damaged by mining, so that farming would be precluded. The Supplement to the Williams Fork Management Framework Plan states that intensive inventories to determine the presence of alluvial valley floors were not done at the time of the application of the criterion. Our concern is that once a tract has been leased and the mining plan prepared the likelihood of finding that tract unsuitable in light of the time and expense that has been invested for developing it is greatly reduced. These lands would be more securely protected, and unnecessary expenditures of time and money would be prevented if a more thorough determination as to the existence of alluvial valley floors is made in the land-uae planning stage.

3. Thresholds.

44 Fed. Reg. § 3420.2-3(f) (July 19, 1979) encourages the application of impact thresholds to "halt, suspend or condition further conaideration of the areas otherwise considered

acceptable for further consideration for leasing." The Green River-Hams Fork region appears particularly appropriate for the application of impact thresholda--i.e., to prevent cumulative or area-wide impacts which would exceed environmentally acceptable levels. Although application of impact thresholds is not a requirement if existing land-use plans are being applied, considering the extent of impacts already predicted in the region, development and application of these limits may be essential to prevent this project from taking the region past its impact "breaking point." We urge the BLM to initiate and complete this procedure prior to iasuance of the final EIS.

B. Inadequacy of the DEIS.

1. Discussion of Impacts is Inadequate Due to Errors in the Baseline Data.

The no-action alternative (baseline information) on which the assessment of the impacta of federal coal leasing is based, predicts very serious impacts on all areas of analysis in the region. It is our understanding that for the Colorado region these predictions are based on the 1978 Supplement to the Northwest Colorado Coal Regional EIS of 1976. This Supplement predicted coal production in 1987 to be nearly twice as high as BLM is now estimating. Apparently the estimatea of impacts reflected in that Supplement were never altered before use in the Green River-Hams Fork DEIS, although impacts obvioualy will not occur to the extent predicted in that document. Similarly, in Wyoming, the prediction of impact is based on the assumption that coal development will occur with or without federal coal leasing. This result is highly unlikely, in light of the checkerboard pattern of land ownership in Wyoming. Therefore, the estimated impacts under the no-action alternative in Wyoming is also too high.

This approach to choice of baseline information underlies what appears to be the basic premise of the analysis of impacts resulting from the proposed action--that the effecta of the federal coal leasing will be relatively inaignificant, in comparison to the already existing impacts, and thus acceptable. We feel that this analyais, and the premises underlying it, are dubious. In any event, impacta should be viewed in terma of their cumulative effect, not their comparative one. This is especially so in a region where impacts already may be so serioua (though not yet ao severe aa BLM makes it appear) that any additional adverse effects may be extremely damaging.

There are also potential impacta in the region arising from other sources that were not included in the analysis. The omiasion of possible PRLA development reaults in inaccurate impact prediction. The fact that the proposed Moon Lake power plant ia being treated in a separate EIS ia irrelevant (DEIS, p. 9). The issue here is the cumulative impacta of the proposed action considering other potential projects, and Moon Lake and aimilar proposal should have been considered. The DEIS atates that other projected development, such as oil shale, is included in the

baseline data (DEIS, p. 9). Whether or not this is so is not apparent anywhere in the DEIS itself.

The results of these errors and the choice of information by which to measure impacts is confusion as to what the regional situation is in reality. Until this confusion is alleviated and the baseline errors rectified, the DEIS provides a very weak basis for true impact analysis and ultimate decisionmaking.

2. Inadequate Discuaaion of Impacts on Wildlife.

One shortcoming in the treatment of wildlife and wildlife habitat impacts in the DEIS is the analyais contained in the site-specific matrices of Vol. 2. These are deficient in information on wildlife as well as other areas. The worst criticism of the discussion of wildlife impacts arises from the failure of the DEIS to adequately address the worst case scenario--the impacts on wildlife as a result of failure to reclaim the mining tracts. The discussion of wildlife impacts repeatedly relies on the assumption that reclamation of the lease tracts will be successful, resulting in what BLM refers to as "short-term" impacts. The conclusion is that these impacts are insignificant because they will end with the life of the mine. We find that conclusion itself questionable, in light of the time period involved (10 to 30 year mine life plus up to 50 year reclamation periods) and because of the possible longer-term (indeed permanent) effects on species arising from the possible failure to reatore the land (see above discussion on reclamation).

Another error in the treatment of wildlife is the failure to address impacts on habitat resulting from diaplaced herds. The DEIS apparently assumes that there are nearby areas which will supply the habitat needs of the displaced herds without disrupting species existing in those areas, a concluaion we find questionable. Nor does the DEIS treat the issue of overgrazing, which has historically occurred in the region, and if aggrevated could lead to serious adverse effects.

3. Inadequate Discussion of Impacts on Soil and Vegetation.

Due to the low potential in the region for successful reclamation, revegetation and/or restoration, we believe that the discussion in the DEIS should have been much more extensive on the impacts which will result from possible failure (see the above comments on reclamation).

4. Inadequate Discussion of Transportation Impacts.

Another area of deficiency in the DEIS is its treatment of transportation impacts. The environmental impacts reaulting from construction of railroad spurs are nowhere addressed. Nor is the likelihood of increased development (particularly mineral) along the new rail lines considered, or ita possible impacts analyzed. These secondary impacts should be addreased.

5. DEIS is not Sufficient as a Site-Specific (Lease Tract) EIS.

The site-specific analyses of individual tracts require extensive development. Volume 1 of the DEIS rarely deals with the site-specific situation. Volume 2 containing the site-specific matrices is seriously deficient in many particular instances (wildlife analysis, reclamation potential, etc.). Furthermore, it is subject to BLM's caution that new data is available but is not included in the DEIS (see Vol. 1 DEIS, p. 1). The implication seems to be that a major portion of the DEIS is invalid. In any event, unless site-specific data is sufficiently described and shown to be adequately updated, and adverse impacts of development are sufficiently and in substantial detail examined, individual tract EISs will be necessary as site-specific leasing determinations are made.

6. Inadequate Discussion of Alternatives.

We do not believe the alternatives addressed in the DEIS provide a sufficent range for realistic decisionmaking. The only actual choice offered is between no leasing, or different amounts of leasing as measured by tons of coal. We believe other alternatives should also be considered. For example, a different type of leasing schedule could be employed, allowing for a minimal amount of initial leasing, with additional tracts made available as deemed necessary to supply the national need, or contingent upon the proof that the FCMP has resulted in the kind of planned, environmentally sound development it was intended to produce. Another alternative would be to rank the tracts on an environmental basis; the least damaging tract to be made available for leasing first, etc. An additional alternative would be one that offers some range of options to the State of Wyoming--the named alternatives all include the leasing of all five tracts in that state. In short, as it now stands, the DEIS offers only a choice in amount of coal to be produced, and forecloses consideration of other interests (e.g., timing, environmental damage, etc.).

Conclusion

We do not believe the process of federal coal leasing in the Green River-Hams Fork region has served the FCMP's purpose of reconciling sound coal development with responsible environmental protection. Nor do we believe the DEIS has accurately or sufficiently summarized the environmental impacts that may result from the coal leasing as proposed.

The coal leasing procedure applied in Green River-Hams Fork will set the pattern for coal development in that region and will also provide a model for later leasing in other regions. For this reason, and others, the coal leasing decisions made here should have much more integrity than we have seen to be the case so far. The DEIS should be either extensively supplemented or redrafted, using more up-to-date and complete information, relying in particular on more current land-use plans and exploring

a wider range of realistic leasing options.[1] Finally, before the final EIS is issued and the decisionmaking phase reached, there must be a much more faithful application of the Federal Coal Management Program regulations. 44 Fed. Reg. § 3420.4-4(f) allows the Secretary of Interior to postpone the leasing process to respond to considerations such as major planning updates, and other changes affecting the process. This section provides the leeway necessary to make these necessary modifications in the leasing process.

Sincerely,

Cass Haug

Cass Haug
Legal Intern

dh

[1] The changes that are necessary in the DEIS are so substantial as to require an extensive supplement, if not a second draft. Failure to issue an additional document including the necessary changes would contravene both the purpose of NEPA as an environmental full disclosure law and its requirement for inter-agency and public consultation. NRDC v. Hughes, 437 F. Supp. 981 (1977).

UNITED STATES DEPARTMENT OF COMMERCE
The Assistant Secretary for Productivity, Technology, and Innovation
Washington, D.C. 20230
(202) 377-8300 x 4335

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July 7, 1980

Mr. Dan Martin, Team Leader
Bureau of Land Management
Craig District Office
P. O. Box 248
Craig, Colorado 81625

Dear Mr. Martin:

This is in reference to your environmental impact statement entitled "Green River-Hams Fork, Regional Coal (Colorado)." The enclosed comments from the National Oceanic and Atmospheric Administration are forwarded for your consideration.

Thank you for giving us an opportunity to provide these comments, which we hope will be of assistance to you. We would appreciate receiving eight (8) copies of the final environmental impact statement.

Sincerely,

Bruce R. Barrett

Bruce R. Barrett
Acting Director, Office of
Environmental Affairs

Enclosure Memo from: Mr. Robert B. Rollins
National Ocean Survey
NOAA

Rec'd PP/EC JUN 26 1980

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SURVEY
Rockville, Md. 20852

JUN 20 1980

OA/C52x6:JLR

TO: PP/EC - Joyce M. Wood

FROM: OA/C5 - Robert B. Rollins

SUBJECT: DEIS #8005.04 - Green River - Hams Fork; Colorado

The subject statement has been reviewed within the areas of the National Ocean Survey's (NOS) responsibility and expertise, and in terms of the impact of the proposed action on NOS activities and projects.

Geodetic control survey monuments may be located in the proposed project area. If there is any planned activity which will disturb or destroy these monuments, NOS requires not less than 90 days' notification in advance of such activity in order to plan for their relocation. NOS recommends that funding for this project includes the cost of any relocation required for NOS monuments.

50

BUREAU OF LAND MANAGEMENT

DEPARTMENT OF THE INTERIOR

IN THE MATTER OF THE DRAFT)
ENVIRONMENTAL IMPACT STATE-)
MENT FOR THE GREEN RIVER-HAMS)
FORK COAL PRODUCTION REGION)

TRANSCRIPT OF HEARING PROCEEDINGS

PURSUANT TO NOTICE duly given to all parties in interest, this matter came on for hearing on the 25th day of June, 1980, at the hour of 7:40 p.m., at the Jeffrey Center, Rawlins, Wyoming, with Jerry Magnuson, representative of the chairman of the Regional Coal Team, presiding; and Pat Geehan, Cecil Roberts, Joe Patti, Warren White, Ann Vance, and David Kuntz also in attendance.

A P P E A R A N C E S

Pat Geehan:	Office of Coal Leasing and Planning Coordination, Department of Interior
Cecil Roberts:	Representative of the Colorado State Director of the Bureau of Land Management
Joe Patti:	Representative of the Wyoming State Director of the Bureau of Land Management
Warren White:	Representative of the Governor of Wyoming
Ann Vance:	Office of the Solicitor, Department of the Interior
David Kuntz:	Representative of the Governor of Colorado

for any or all of these hearings, you can make arrangements with the court reporter either -- well, you have to do it following this hearing.

I would like to request that each speaker state their name, address, and organization they represent, if any.

When I call your name, please go to the podium.

David S. Moody.

MR. MOODY: My name is David Moody. I am from Baggs, Wyoming; and I'm representing the Wyoming Game and Fish Commission. I won't get into the specifics of our comments. They've been heard before at meetings last week and before. We will submit written statements to the panel.

I'd like to basically submit two complaints about the EIS as it's presented. The first complaint we have is the basic lack of data for the EIS for the transactions that were analyzed in Wyoming. Much more definitive baseline information is available than is presented in the EIS; and we feel that should have been presented in your document.

The second thing I'd like to address is the fact that this site, the Red Rim-China Buttes site, is currently classified as suitable pending further study. There are currently three studies underway on that site

now.

One is revegetation study conducted by Rocky Mountain Energy. The second is an antelope study conducted by the University of Wyoming, Bureau of Land Management, and Wyoming Game and Fish. And the third is a sage grouse study being conducted by Rocky Mountain Energy.

We submit that if the Bureau decides to lease this tract of land before the studies are completed, that it -- it will probably not make much sense in the fact that the studies haven't been completed. And there is no further data available than when the determination was made that studies were needed.

Based on that fact, if the BLM decides to change the classification of this site to suitable, we submit that the mitigation measures as presented in the EIS will not alleviate or mitigate wildlife loss on the crucial red mule deer or sage grouse or antelope.

We would like to see more definitive mitigation measures taken, and these will be outlines specifically in our written statements.

MR. MAGNUSON: Are there any questions for Mr. Moody from the panel?

MR. WHITE: Will these comments be coming to the state office?

MR. MOODY: Yes, they will.

MR. KUNTZ: When do you anticipate the study results will be available?

MR. MOODY: The studies were started last fall, and they were determined to run for a minimum of two years to get the additional baseline information that the BLM and the Game and Fish decided that was needed before the site could be classified as suitable or unsuitable.

MR. MAGNUSON: Any other questions? Thank you, Mr. Moody.

David Porterfield.

MR. PORTERFIELD: My name is David Porterfield. I represent Arch Mineral Corporation. That's Post Office Box 530, Hanna, Wyoming.

Arch Mineral would like to take this opportunity to convey several of their feelings concerning the Red Rim-China Butte Area. Considering that Arch Minerals will probably be an operator in this area, we have a definite interest in these proceedings. And I feel we've been adequately represented at all of the processes of the reviews of this hearing.

First of all I'd like to say that I like to concur with Mr. Moody that there is the lack of data at several of these sites, specifically on soils, air

quality, the population estimates for the socioeconomics that were dealt with last week and a few other things that were mentioned last week also such as the ferret studies and wildlife critical habitat.

I feel that this address has basically addressed all the topics that need to be addressed; however, as I've stated earlier, I do not feel that the data is totally in depth. I would like to state a few instances where I've found discrepancies in the data or lack of data that should be useful in evaluating this environmental impact statement.

The first one is on land use. And one of my biggest problems with this is there is the use of an VRM, a visual resource management guide, which uses visual resources rather than the usual land capability classification system. I feel this land capability classification system should be utilized. It takes into account the visual resource management, and it also takes into a class -- into account several other things such as what is the land being used for and what are its potentials, which is the crux of the situation as far as reclamation goes.

The second thing I would like to point out is under the climatology section. The estimate of Fox Park, Wyoming, which I believe is in the Sierra -- or in the

Snowy Range, was used as a -- it said that was climatologically representative of most Wyoming mining areas. If you'll note, it says that it is also at the altitude of 2,750 meters, which is about 9,000 feet. And I believe the Hanna and the Kemmerer areas are both the only areas that are the highest in the state. And they were approximately 7,000 feet. This is a large discrepancy, and not too many judgments can be made based upon this data.

The lack of data concerning the climatology of the area is another big factor.

As far as the air quality goes, I've seen an estimate of 28 micrograms per cubic meter as being the background data for air quality of PSI monitoring. I can find no where that the air quality division of the Department of Environmental Quality has any of this data, that they have not determined this to be the background data at the Hanna Basin. And matter of fact, today the DEQ told me it was 48 micrograms per cubic meter, which is quite a discrepancy and could lead to some companies now receiving their air quality permits in the future.

I would like to also say that while this document does address all the major issues, I feel that several revisions are needed. And while this may hold

up the review and the finalization process, I feel it is inthe best interest of all industry and land owners and the BLM and in their best interest to follow through with this.

I will also submit a written statement at a later time. Are there any questions? Thank you very much.

MR. MAGNUSON: Thank you, Mr. Porterfield.

Clark Bolser.

MR. BOLSER: Clark Bolser, 4587 South Oneida Way, Englewood, Colorado.

Mr. Magnuson, panel members, ladies and gentlemen, I'm Clark Bolser, manager of Environmental Services for Rocky Mountain Energy Company. I appreciate the opportunity to be here this evening to provide some thoughts on the draft environmental impact statement for federal coal leasing in the Green River-Hams Fork Region. I would also like to make a few remarks regarding the evaluation and decision-making process that has resulted in the preparation of this draft statement.

As you are probably all aware, RME has considerable interest in the federal coal management program and the leasing of coal in the Green River-Hams Fork Area because of our coal interest adjoining federal lands within southern Wyoming.

For many years we have recognized the need for additional leasing of federal coal in southern Wyoming and are pleased to see that the federal government has also recognized this need. Because our expertise is primarily with the proposed lease areas in Wyoming, in particular the Red Rim-China Butte tracts, I will limit my comments to those portions of the draft statement dealing with these properties.

At the outset we want to commend the BLM, USGS, and the State of Wyoming personnel who have worked on the land use decisions, tract identification and evaluation, and the statement.

Given the time and man-power limitations placed on project personnel for these evaluations, the statement represents a good work product. For the most part, an appropriate assessment of the environmental and socioeconomic impact for the southern Wyoming coal lease tract has been made. While limited specific areas of the statement need revision -- such as inconsistencies in time frames required for reclamation, and updating the site specific analysis to account for new data, revised management objectives and additional approaches to impact mitigation -- we believe that the major issues raised during evaluation have been appropriately addressed in the draft statement.

Limitations or potential problems with the assessment can be eliminated in the final statement. It must be remember that numerous opportunities for detailed review and refinement exist before comprehensive mine plans are developed and approved. In the near future we plan on submitting specific written comments which will elaborate on the areas we think need further evaluation.

During the past 15 months we have had -- we have made great advances in our understanding of the Red Rim-China Butte Area and ways to alleviate impact from mining in this area.

This has been accomplished through one of the most unique examples of cooperation between all levels of government, land owners, and industry that has ever occurred. I want to share briefly this experience with you because without this high level of cooperation, it is unlikely that the necessary evaluation could have been made in time for the 1981 lease sale. This cooperation and the results obtained would not have been realized without the participants making the commitment to find solutions to the issues raised and displaying considerable good will in the process.

One common objective that was accepted by all the participants is that wildlife resource and habitat restoration should be considered in formulating

leasing decisions and mining plans.

When this evaluation commenced, a number of uncertainties existed on the importance of the area for wildlife and the level and duration of mining impacts. Faced with this enormous challenge, staff and the BLM, the Wyoming Game and Fish, University of Wyoming, and RME, with technical input and financial support from numerous other federal and state agencies and companies, jointly developed and implemented a comprehensive study program designed to gain a better understanding of the area's suitability for mining and to develop appropriate mitigation strategies for use if mining commennced.

Let me briefly describe some of the activities that have been undertaken: An extensive pronghorn study covering some 750 square miles was initiated, including the trapping and marking of over 200 antelope to identify the importance of the area as a pronghorn habitat and to determine its significance as a winter range.

A thirty-month sage grouse study of the same area was initiated, including the trapping and tagging of 175 birds to identify the importance of the area for sage grouse winter range and breeding habitat and to determine the applicability of innovative

mitigation techniques such asstrutting ground relocation. For habitat evaluation purposes in both studies, a vegetation mapping and analysis program of this area -- the whole 750 square miles -- was initiated to identify the location and extent of important habitat areas.

The information developed by these three programs is being used to identify the capacity of the region to support animals affected by mining. A key issue recognized early in the evaluation process was the potential for rapid reclamation of important wildlife habitats, particularly antelope winter range. To demonstrate the ability to reclaim these areas to wildlife habitat in a short time period, a reclamation testing program was initiated. This program included actual simulation of mining, including topsoil and overburden removal and replacement. Mature shrubs from the immediate vicinity of the disturbed area were transplanted to the recontoured surface.

Results obtained to date from this effort in other reclamation work conducted within the region convinces us that the Red Rim-China Butte Area can be reclaimed in a short period of time to antelope winter range. When these studies are completed -- it will be well in advance of mining -- plans for mining and reclamation can be developed, which will minimize impact

to wildlife in the area.

I can not think of another case where this level evaluation has been conducted prior to leasing federal or state land for future coal development.

Based on what we have learned, the analysis contained in the statement appears to represent a conservative assessment of mining impacts, mitigation potential, and the time period required for adequate reclamation. Approaches to mitigation have been discussed jointly by BLM, the State of Wyoming, and local land owners. And there is broad agreement on the viability of measures that have been identified. It has been recognized that, one, mining plans must be developed in the manner that will minimize disturbance areas; two, grazing regimes must be adjusted to allow for the support of both livestock and wildlife; three, reclamation plans must be designed which accomodate the needs of wildlife as well as livestock; and four, mitigation measures to meet the short-term needs of wildlife such as supplementary feeding must be evaluated and refined.

This type of concerted planning efforts by all concerned groups will result in the development of an environmentally acceptable mining operation.

I would also like to briefly discuss potential

socioeconomic concerns presented by future energy development in the region.

The analysis contained in the draft statement and the south-central environmental impact statement primarily addresses the effects associated with mining existing and proposed federal lease areas.

Impacts associated with possible synthetic fuels development, energy conservation facilities, and other projects in the region are not clearly identified.

While it is probably inappropriate to speculate on such developments in the statement, it is clear that federal state and local governmental decision makers in developing their future planning activities need to be aware of such developments and the effects they will have on communities in the region.

If planning for future development was conducted by companies in a vacuum, we would have concerns about the capacity of the basic infrastructure of Rawlins and other communities in the region to cope with the impacts of such developments. However, we believe that these impacts can and will be adequately addressed by local communities working closely with industries.

There are presently in place planning mechanisms that would enhance this process. Regional industrial developments -- or pardon me -- developers are

also working with local planning agencies and officials to plan for needed community developments.

This type of community-industry cooperation has proved -- has proven effective in Carbon County and elsewhere. Furthermore, when you consider the lead times required to formulate development plans and obtain the necessary preconstruction approvals, sufficient time exists to formulate an implement community development plan prior to the time major impacts would occur. This cooperation is evident within the region, and we believe that all levels of government, the public, and developing industries are committed to maintaining the quality way of life that exists. Thank you.

MR. MAGNUSON: Are there any questions?

MR. ROBERTS: I have a question, Jerry. I have a little difficulty in my own mind between your comments and Mr. Moody's comments. Are you talking about the same studies?

MR. BOLSER: Yes, we are.

MR. ROBERTS: And then your conclusion of what has been learned from the studies and the -- the time limits of these conclusions is different from Mr. Moody's?

MR. BOLSER: To make evaluations of what

is a most critical winter range in this area may not be possible for many, many years. The studies that were designed and implemented solve the problem. Actually my coming up with the ultimate determination -- I mean, we could collect data for years.

Two years ago we had a very bad winter. Limited information that was collected that time suggested there might be a serious problem that could occur. That was one of the reasons for the broadness of these programs, looking at habitat, utilization, distribution over large areas. Also the ability -- well, various other natural and physical obstructions or barriers to antelope movement are also being considered or being investigated right now in the studies.

Habitat improvement, relocation of animals, and some of the adjacent habitat that would be acceptable is all part of the program.

The key I think ultimately to the program is the reclamation of test-plot area that has been started because there was some real concern if you could reclaim that site because nobody had demonstrated on that site in the past that reclamation could occur. I think maybe that is not even a correct statement because the Bureau a number of years ago started a test plot even though it was in a simulated mining exercise nearby, and there was

tremendous success in revegetation especially in grasses. But the goal was to try to reestablish a pronghorn range, something that could be used as winter range in a very short amount of time.

The other thing you must consider is that this mining -- the amount of land that is actually disturbed at any one time is really relatively small compared to the whole lease tract. We have seen after a fall planting and a spring planting and even some emerging shrubs in the transplant area, voluntary shrubs or natural infiltration of some of the native species, that there appears to be good success with techniques that we have used already.

We have looked -- searched the literatures, looked at other mining operations in the region for similar techniques of transplanting mature shrubs or other type of ways of establishing shrubs in a relatively short amount of time, and there seems to be, based on literature that we've submitted -- and I'm sure the Bureau has done independent work also on this -- that shrubs can be reintroduced in the area in a very short amount of time.

There are also problems in the area that how large the herd, how the antelope herd is going to be managed. I guess it's been -- it appears clear to

some people right now that the herd may be larger than the area can support. In fact, I think there was a recommendation to try to reduce it in the area and lease certain parts of that region that the antelope moves throughout these lease tracts. So there is many factors. But he bottom line we feel is even if you could ever determine if this is a most critical winter range, which would say it could be unsuitable, we're convinced now that there is methods for mitigation that in the long term there will not be these major effects on this species or that herd unit. And that's an exception could always be applied.

Ultimately what our goal was in the studies is to get in place programs that just didn't answer that question, but ultimately came up with the optimal techniques or a number of techniques that could be utilized on that site to minimize impacts on pronghorn, sage grouse, or other important wildlife species or high interest species. There really wasn't an issue through the suitable criteria used on these sage grouse clacks except on some private sectors out there where there was one identified. We offer to develop this program, implement it, and even run a demonstration if it proves desirable to try to relocate that clack and private lands prior to any mining in the area. We're

convinced, and I believe the Bureau people are convinced, that there have been sufficient relocation in this country. There should be no problem on this site, but really the studies were not just to answer a narrow issue, but to go even beyond, to come up with the ultimate answer so when mining plans were being formulated and filed, that we would have the best or optimum solutions in place to mitigate that site.

MR. KUNTZ: I'm still having a little trouble. If this is the same study that has a conclusion -- conclusion in 1981, it seems to me that we're not even halfway through it yet. Are you confident; in other words, are you drawing preliminary conclusions from the data received by making the statements? I don't quite understand what the -- what the status of the study is right now. Is it concluded, or is it halfway through or what or are results -- are they available?

MR. BOLSER: Well, there is a number of conclusions that can be drawn from this past year. There wasn't a critical winter range. Antelope move all over the place. Even some obstructions you think would be barriers to their movement don't seem to be barriers. I guess one even collared antelope across the Platte River in high water during spring runoff, is overrunning east somewhere right now.

We've seen antelope move from all ends of the area. That information alone suggests that at least that normal years right now that the importance of the area is really not that -- that great.

We hope that the studies will continue because, as I said just previously, the ultimate goal is to come up with as much information as possible to find out the needs of the pronghorn in that region. I think Game and Fish is committed -- or would be committed to try and see this through to find out -- to come up with a better understanding of how large that herd unit should be, where they should manage it, how they should manage it. I think BLM is also interested in it for their other activities in the area.

It is really going to be difficult, I think, unless we have a lot of severe winters to ever determine that that's an ultimate, most critical winter range on that site.

What we hope to do, and I think it's been pretty well demonstrated right now to my conclusion, that the exception or mitigation techniques do exist. And I think the last meeting that was held a week or two ago, it was the consensus of the participants that mitigation techniques do exist that would allow no acceptable levels of impact to occur on that area even in very bad weather

conditions, winter weather conditions.

So it's really tough, I think, to answer the first question. It may be an unknown for many years.

I think we are -- our whole goal was to look beyond it and see if there were solutions even in the worst condition. Now we all, you know, to -- to have acceptable coal development in an area, except from the standpoint of minimizing environmental impacts, there is going to have to be a lot of tradeoffs. Companies that develop in that area are going to have to develop their plans to minimize disturbance, to use stay of the art reclamation techniques on that site. I mean, they are going to have to do a decent job. They are not going to be able to leave a lot of areas open, or there is going to be chances for more impact.

I think the landowners in that area understand there is going to have to be some temporary tradeoffs in the use of the range. I think Game and Fish understands too. There may have to be some temporary tradeoffs on how large they manage the herd on any one time or any one site.

We're committed -- at least we're committed to make those tradeoffs. I think -- or I believe the landowners are also. I also believe that the Department of Game and Fish is also. We definitely don't plan or

whatever -- hope or pose to terminate these studies even if a decision was made to lease intract in '81. We think they should go on and come up with the ultimate solution to potential problems out there, and we're committed to following through on that.

MR. MAGNUSON: Thank you very much, Mr. Bolser.

Are there any others present this evening that wish to present oral testimony? I'll declare this hearing closed. I appreciate your interest and participation in the federal coal management program.

At this point we would entertain questions you might have pertaining to any aspect of the federal coal program. We have people here on the panel and in the audience who, I think, will attempt to answer any questions you might have. Thank you very much.

(Hearing proceedings concluded 8:17 p.m., June 25, 1980.)

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U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
ENVIRONMENTAL RESEARCH LABORATORIES
Boulder, Colorado 80303 RX9

July 9, 1980

EIS Team Leader
Bureau of Land Management
Craig District Office
P.O. Box 248
455 Emmerson Street
Craig, CO 81625

Dear Sir:

I would like to make a few comments on your DEIS of the Green River-Hams Fork Regional Coal Environmental Impact Statement. First, my scientific interests are in the area of atmospheric diffusion of pollutants and clear air turbulence. This frequently overlaps into widespread evaporation from agricultural regions and inadvertant weather modification (yes, they are related). In particular we have been working with NOAA/EPA at Research Triangle Park, N.C. to develop a method of utilizing satellite infra-red imagery to predict atmospheric diffusion parameters utilizing our airborne measurements as intermediary ground truth. A preliminary draft of the early part of this work is enclosed for your information. We now have such data from various parts of the NE corridor (Tenn.-Penn.). It is my interest to extend our work to your area. This may be done at little extra costs to our project but would require your guidance as to areas of future development so that we may do a before, during, and after type study.

My colleague, Dr. R. Pueschel's comments are also enclosed. Rudi works with the chemistry of such problems.

Some specific comments on the material of the DEIS:

P 222-227: it appears that a typo has been consistently made for particulate matter concentration - the nomenclature should be brought into line with that of figures 4.1 to 4.9.

As a matter of interest the concentrations of TSP are nicely in agreement with those of the literature (Reinking, attached):

Mohave Desert - background	25-30 $\mu g/m^3$
Pasadena - smog	100-120 $\mu g/m^3$
Mohave Desert - dust storm	1000 $\mu g/m^3$

My schedule now takes me into the field until early fall. I will be in contact with you at that time.

Sincerely,

B.R. Bean

Bradford R. Bean, Chief
Boundary Layer Dynamics Group

Enclosures

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
ENVIRONMENTAL RESEARCH LABORATORIES
Boulder, Colorado 80303

July 1, 1980 RD/R32T:RFP

To: RD/RX9: Brad Bean

From: RD/R32T: Rudi Pueschel

Subject: Critique of Green River—Hams Fork Environmental Impact Statement

Totei suspended particulates (TSP) is a poor air quality measurement. This is so beceuse particuiate mass determinations respond to the very lerge particles only. Their atmospheric residence time is limited because of their high settling velocity.

All environmental and health effects are determined by particie size and particie chemical makeup. Next to meteorology, these particle properties must be measured to assess the environmental impact of coel mining and combustion.

HEALTH EFFECTS:

The biological importance of particle size is based on three factors. First, particles above 10 μm in radius are largely retained in the mucous membranes of the nose, accessory nasal sinuses, pharynx end orel cavity. Second, particles from 0.25 to 10 μm in diameter are lergely retained in the alveolar region, bronchi and/or trachea. Third, only a small percentage of particies iess than 0.25 μm in radius are retained in the lungs. During normal breathing, maximal lung retention is ebout 80% for 1 μm perticles, and is less than 5% for particies smaller then 0.1 μm end perticles larger than 15 μm.

The toxicity of coal dust is strongly determined by the elemental composition of the particies. The retention time in the human body is dependent on the water-solubility (≙ Chemistry) of the particles. Several elements found in coal (As, Hg, Cd) are toxic. As of very iately, radionuclides found in coal are of much concern.

VISIBILITY:

Particles larger than 0.1 μm radius are efficient light scatterers end absorbers. To asssess the effect of a coal dust cloud on visibility, it is important that the distribution of particies of sizes larger than 0.1 μm be meesured.

In addition to those factors that affect visibility through changes in the dispersion of particulate materials, there are those that alter visibility by affecting the size of hygroscopic particulate materials in the atmosphere. Hygroscopicity, in turn, is determined by the chemical composition of the particles.

CLOUD MICROPHYSICS:

The last point also applies to the effect of dust on the cloud microstructure. Water-soluble material in the dust can make a dust particle an efficient cloud condensation nucleus to affect the number concentration and size distribution of cloud drops.

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DEPARTMENT OF HEALTH AND HUMAN SERVICES
OFFICE OF HUMAN DEVELOPMENT SERVICES
OFFICE OF THE ASSISTANT SECRETARY
WASHINGTON, D.C. 20201

JUL - 8 1980

Mr. Dan Martin
Team Leader - Green River/Hams Fork
Bureau of Land Management
Craig District Office
P.O. Box 248
Craig, Colorado 81625

Dear Mr. Martin:

Thank you for the opportunity to review and comment on the Draft Environmental Impact Statement identified as Green River-Hams Fork Regional Coal, located in the area of Craig, Colorado.

In general, we find that this statement was carefully prepared and gives sufficient information on the anticipated land and coal-related development actions. It also describes the environmental impacts that will result from the implementation of the proposed construction of the Green River/Hams Fork coal mining tracts.

However, this statement does not address any information on the present or future plans for the development of comprehensive and coordinated human service programs to be made available for senior citizens, the children, handicapped individuals and the local minority population. We are deeply concerned about the availability of generic and clinical social services, of housing, employment, public transportation, recreational, health, school and shopping facilities, and the other human services. We feel these concerns need to be considered in the final development plan of this project.

We would appreciate your cooperation in providing us with this information.

If you have any question about our concerns, please contact Mr. Max Wenk of my staff at the above address. Mr. Wenk can be reached by phone on (202) 472-4415.

Sincerely,

Jesse J. McCorry for
Warren Master, Acting Director
Office of Policy Development (HDS)

NO POSTMARK
RECEIVED 7/14/80

DEPARTMENT OF HEALTH, EDUCATION AND WELFARE
DEPARTMENT OF HEALTH AND HUMAN SERVICES
Office of Human Development Services
Office of the Assistant Secretary
Washington, D.C. 20201

July 8, 1980

Mr. Dan Martin
Team Leader - Green River/Hams Fork
Bureau of Land Management
Craig District Office
P.O. Box 248
Craig, Colorado 81625

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Sincerely,

/s/ Jesse J. McCorry
for
Warren Master, Acting Director
Office of Policy Development (HDS)

July 8 1980

53

EIS Team Leader
Bureau of Land Management
PO Box 248
Craig, Colorado 81625

Dear Sir,

I have recently reviewed the DEIS on the Green River-Hams Fork Coal Leasing and I would like to address my comments to that statement with particular regard to that portion in Wyoming.

From the outset it appears as if Wyoming is going to get the short end of the stick again. I still can not understand for the life of me, why all Wyoming leases are included in all of the alternatives - even the lowest alternative. This appears to be an arbitrary and discriminatory decision, especially in view of the fact that the Red Rim - Chicken Butte lease is of coal of better quality than elsewhere.

I am a Wyoming native having lived here since grade school and I have seen many changes due to coal development over the last decade. Not all of the changes have been for the worse.

A booming economic picture is a pleasant thing to enjoy if one is in a position to take advantage of such a thing. However, there is much more to living in Wyoming than just making money.

One value of particular concern is wildlife and your statement addressing wildlife habitat and population loss is a price that I, for one, am not willing to pay.

I believe that the question boils down to this. How much more impact can we absorb and still maintain a tolerable life-style?

Is the BLM primarily responsible for creating a national energy sacrifice area under the guise of an environmentally responsible approach to the energy crisis, or is the BLM following congressional mandate to manage the land for the best guaranteed long term public benefit?

I would like to direct your attention to a study recently released by the National Academy of Sciences in which they assert that lands receiving less than twelve inches of rain per year are not reclaimable under the present constraints of revegitation with natural flora. Should we not be assured of compliance with OSM regulations before we jump and allow all these leases to be let.

I would also like to direct your attention to the Jim Bridger Coal Mine and to what seven years and untold millions of dollars of reclamation efforts have achieved. Does it make good common sense to open up more lands to strip mining before we have seen that they can in actuality reclaim the lands already stripped?

Do we really need this much additional coal? Little attention was given to this question - the DEIS?

You have identified individual impacts quite thoroughly. Effects on air quality, water quality, wildlife etc. are documented. However, you have failed to consider the cumulative effects on wildlife habitat loss and ground water quality in regard to past and proposed future leasing to meet regional leasing targets.

I do not agree that climatological effects are negligable, especially considering end-use of the production and the climatological unknowns of increasing CO_2 and SO_2-NO_x concentrations.

Some statistics in the statement do not make sense. Production of 14.8 mt/y. in Colorado will jump to 27.4 mt/y according to the statement and yet within the same figure you state that the additional impact will be almost negligable. I disagree. This almost doubling of production will almost double the impact.

I do not have the time to go into depth on every point as I must get this letter in tonight to get it considered. I do want to go on record as urging the BLM to "go slow" with this leasing until it has been proven that our region can absorb the impact without radically altering our lifestyles, without seriously effecting wildlife populations, without destroying ground water aquifers for generation to come and without irreversibly altering our landscape and native flora in these areas.

Let us let our reclamation scientists develop the science for reclamation of arid landscapes before we destroy more land.

Thank you for the opportunity to comment.

Sincerely

Craig A. Thompson

United States Environmental Protection Agency

Region 8
Suite 103
1860 Lincoln St.
Denver, CO. 80295

Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming

54

EPA

JUL 9 1980

REF: 8W-EE

James H. Rathlesberger
Special Assistant to the
Assistant Secretary of Interior
Office of the Secretary - USDI
Washington, D.C. 20240

Dear Mr. Rathlesberger,

The Region VIII Office of the Environmental Protection Agency has reviewed the draft environmental impact statement for the Green River-Hams Fork Regional Coal leasing program. Generally we find that the EIS adequately characterizes most of the environmental impacts at the program level for the proposed leasing.

The presentation of both the need for leasing and the impacts of the No Action alternative needs clarification. EPA believes that socio-economic impacts from "boom-town" growth may constitute the most serious impacts and these impacts need to be closely factored into decisions about levels of new leasing. The proximity of other energy developments also needs to be considered in assessing the total socio-economic impact.

We agree with your conclusion concerning the construction of additional water-storage projects. Such projects must be carefully analyzed to determine whether the benefits of such projects outweigh their impacts on the environment.

We believe there may be opportunities to integrate mitigation of wildlife impacts with ongoing grazing programs in some situations. We also think that the BLM wilderness study efforts need to be more closely coordinated with the coal leasing program.

The attached detailed comments reflect our principle concerns. We have requested some information on potential groundwater aquifer effects on domestic water supplies. We are also concerned about the environmental and social impacts of increased rail traffic through communities and environmentally sensitive areas.

We have rated this draft EIS as ER-2 according to our system of categorizing environmental impact statements. This means that EPA has some environmental reservations and that more information is necessary in the final EIS to adequately characterize the impacts of this program.

Please contact Mike Gansecki of my staff (FTS 327-4831) if you require further assistance in regard to these comments.

Sincerely yours,

Roger J. Williams
Regional Administrator

DETAILED COMMENTS OF THE ENVIRONMENTAL PROTECTION AGENCY
FOR THE GREEN RIVER HAMS FORK REGIONAL COAL DRAFT
ENVIRONMENTAL IMPACT STATEMENT

1) The content and analytical work done in the EIS appears excellent. The areas within EPA's mandated environmental responsibilities--water quality, air quality, noise, etc. have been adequately analyzed for this level of program detail. In particular, the evaluation of the likely prospects for the Craig, Colorado area in light of the State Implementation Plan is accurate, as well as the situation regarding fugitive dust emission regulations for coal mines (page 222-228).

2) We had some difficulty with the organization of the EIS and the manner of its presentation. The comparative analysis of the No Action alternative versus the marginal additions of impacts from various Federal leasing alternatives was not clearly explained at the outset and gave rise to some confusion on our part.

The presentation of information on the potential leasing sites in PART II of the EIS is so extensive as to be generally useless for understanding the relative tradeoffs of these lease sites. It would have been much more helpful to have included within the main EIS document a narrative summary of the significant aspects of each site and a comparative analysis consisting of a few pages. So much information while undoubtedly valuable in developing the EIS analyses and perhaps in the deliberations of the Regional Coal Team, simply cannot be assimilated either by decision makers or reviewers. It would have been of more interest to know what factors in this information led the Regional Coal Team to recommend for or against any of the site choices.

3) The development of the No Action alternative was also confusing. If we understand correctly, the total impact of a given Federal leasing alternative can simply be described as the addition of the No Action effects and the marginal Federal effects. The presumption is made on page 12 that "no new annual production would be generated" with the No Action alternative. Again on page 10 it is roughly assumed that "the level of regional coal production in the No Action alternative should be equivalent to the amount of coal production not dependent on new Federal leasing."

These assumptions, without further support, appear questionable and valid in only a limited context. Why for example, if no new Federal leasing were available, wouldn't other new sources of coal production be possible (existing Feoeral competitive leases, PRLASs, Railroad coal, private or State-owned coal)? This could define a No Action alternative quite different from that presented in the EIS.

4) We have some questions concerning the need for new leasing. Since much of the basis for the EIS analyses rests on the production goals or requirements, it is essential that this part of the EIS be clearly defined. On page 5 for example, the EIS notes that an original leasing target for 531 million tons was selected, later revised downward to 321 million tons with better data, revised upwards by the Regional Coal Team after public input of 416 million tons, and again raised by the Secretary by 25% to 520 million tons. The reasons behind these shifts in production targets are not well explained in the EIS. It is also not clear how the "1987 shortfall of 18.5 million tons" (which is a critical assumption behind these inplace figures) was derived. The final EIS should contain an expanded explanation of how these targets were determined.

Using Table 2-10, the preferred alternative identifies 597.4 million tons out of the 754.6 million tons of in-place reserves as recoverable. This is some 77.4 million tons over the 520 million ton leasing target, and some 181.4 million tons over the Regional Coal Team's target of 416 million tons. The preferred alternative minus the "Lay Tract" would be 526.1 million tons, and some 468.4 million tons without the "Oanforth Hills #2 Tract". Either of these alternatives would be closer to the target range of 416-520 million tons identified above. We would appreciate a better explanation of how the preferred alternative was chosen with respect to the above targets. If a lower target than the 520 million tons is eventually settled upon, the final EIS should identify which tracts would preferentially be withheld from the present round of leasing.

5) It is not clear to what extent the selection of future leasing levels is based on the socio-economic assessment in the EIS. The Federal Coal Leasing EIS identified socio-economic variables as being an area that would receive very close scrutiny in the Regional EIS efforts, in determining leasing levels. The present EIS succinctly characterizes the numerous social and economic problems facing communities like Meeker and Craig, Colorado from coal development, including front-end financing difficulties, rising levels of social disruption, mental health problems, lack of municipal service, etc. Have any of these impact considerations been or will they be translated into "acceptable levels of new leasing."? Further, have these leasing considerations taken into account other likely simultaneous energy developments having similar effects in the same vicinity (especially oil shale and oil and gas developments)?

6) The EIS assessment on coal mining impacts of ground water aquifers concludes that there will not be any identifiably severe impacts. Given the dicussions on the likely amounts of leachate, the concentration, etc. this conclusion appears to be reasonable. The EIS does indicate that in areas of mining disturbance, vertical permeabilities could be dramatically increased. Are there any significant regional aquifers (particularly those that are being or could be used for a domestic water supply) underlying the leasing areas, and which could be affected by leachate from the disturbed mining areas? Are there any nearby communities dependent on such aquifers for part of all of their municipal water supply?

7) On Pages 182-3 the EIS argues that the salinity increases for the North Platte, and Yampa Rivers, and Wilson and Good Springs Creeks will not affect aquatic life in these streams. While this judgement is probably correct, the U.S. Fish and Wildlife Service should be consulted in this final assessment.

8) On Page 184 of the EIS, it is recognized that the municipal wastewater contribution to the Yampa River during low flow periods is a major portion of the total river flow. Local planning efforts underway at Craig recognized this situation although there is a lack of good information on stream quality and aquatic effects at various downstream points. Maintenance of aquatic life for the Yampa River will require stringent controls on all municipal dischargers to the river. It is quite likely that future plants will require some form of ammonia treatment or equivalent treatment through land application.

On page 186, mitigation is suggested in the form of "adopting suggested 1985 effluent standards for the proposed regional wastewater treatment plant at Steamboat Springs and by upgrading sewage treatment plants in Hayden and Craig to those standards". We believe that you are referring to the 1985 "no discharge" goal of the Clean Water Act in your above reference to the 1985 effluent goal. EPA has not defined in policy or regulation how this goal is to be achieved, nor has Congress. Attempts to achieve the 1983 interim goal of support of aquatic life and recreation have been carried out through regional planning, State river classifications, wasteload allocations, and the NPOES Permit system. Congress also created a strong mandate to encourage land application of wastewater as a highly desirable way to meet the above goals of the Act. Wherever land application or wastewater reuse treatment alternatives are found to be environmentally sound and cost-effective within the criteria set by Congress, EPA will fund such land-based systems. It is recognized that land application systems can remove a variety of pollutants which can inhibit aquatic life. EPA will continue to strongly encourage the use of such systems along the Yampa River.

9) We agree with your conclusion on page 186 concerning construction of additional water projects. You state "careful analysis is necessary to determine whether the benefits of such water-storage projects would outweigh their impact on the environment".

10) On Page 912 of the EIS, it is suggested as a way of reducing wildlife impacts to 'require improvement of wildlife habitat on lands that will not be mined within leased tracts while mining is occurring". This raises the question of the possible interaction between BLM actions on coal leasing and companion actions of grazing programs. Has the BLM completed grazing plans and EIS's on lands within BLM jurisdiction adjoined these coal leasing areas? Are there possibilities for both wildlife habitat mitigation and grazing improvement on adjoining non-leased lands managed by BLM?

11) On Page 198 it is indicated that no wilderness potential has been assessed within or surrounding the proposed lease areas. Priority for analysis of wilderness potential should be directed to those lands in and around coal leasing areas to minimize and resolve any future conflicts at an early date. We would appreciate an explanatiuon of how the BLM policies on wilderness study and coal leasing have been applied to this coal leasing program.

12) The method of transportation of coal from western Colorado and the Hanna, Wyoming area appears to be a serious issue. The EIS notes that maximum Federal leasing could result in utilizing 94% of the Oenver and Rio Grande's track capacity. The EIS also briefly notes an increase in safety hazards at at-grade crossings, and impacts in the form of traffic congestion and increased maintenance. The EIS does not go very far in identifying and proposing mitigation for these potentially important effects. No mention is made of increased noise in communities where at-grade crossings exist.

The overall Federal Coal Leasing Program Final EIS noted that the railroads were in an extremely weak financial position to invest in new equipment, let alone improved or increased track capacity. We believe that this issue must be faced by DOI in going forward with an expanded coal program. The EIS makes the statement on page 217 that "The tables (4-51 through 4-54) indicate that no grade crossing would need to be separated as a result of new Federal leasing because, as shown in the 1995 trended table, all but two grade crossings would need grade separation." DOI needs to work with the State and local governments to determine how these improvements will be financed. If the railroads are unable to finance these improvements, the local communities will be burdened with increased congestion, noise, and a serious disruption of community activities.

The final EIS should include a specific identification of the communities affected, some assessment of noise impacts, and what the costs of mitigating these effects (such as through grade separation) will be. It would help to know if the Oenver and Rio Grande or the Union Pacific already have plans to improve some of these crossings. This analysis should also be extended along the principle rail lines to the east and south of Oenver and into Nebraska and Kansas. EPA is already aware of a potential conflict of increased rail traffic from a noise standpoint in the Scottsbluff National Monument in western Nebraska. Some effort should be made to determine whether there may be other such conflicts from an evironmental, social, or capacity standpoint. The final EIS should also consider what measures may be necessary to maintain expanded coal production if the financial resources of the railroads prove inadequate.

Based on EPA's system of evaluating environmental impact statements under its review, we have rated this draft EIS as ER-2. This means that EPA has some environmental reservations, and that more information is required in the final EIS to adequately characterize the impacts of this program.

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United States Department of the Interior

WATER AND POWER RESOURCES SERVICE
UPPER COLORADO REGIONAL OFFICE
P.O. BOX 11568
SALT LAKE CITY, UTAH 84147

IN REPLY REFER TO: UC-150

120.1

JUL 9 - 1980

'80 JUL 11 A7:45

Memorandum

To: State Director, Bureau of Land Management, Colorado State Office, Room 700, Colorado State Bank Building, 1600 Broadway, Denver, Colorado 80202

From: ASSISTANT Regional Director

Subject: Review of Draft Green River-Hams Fork Regional Coal Environmental Impact Statement (DES 80-33)

The Lower Missouri and Upper Colorado Regions of the Water and Power Resources Service have reviewed your agency's Draft Green River-Hams Fork Regional Coal Environmental Impact Statement and have the following comments to offer:

General

1. We find little comparative analyses of alternatives within the text. The matrices are too detailed and complicated for any practical use.

2. There will be no impact on the projects in the Lower Missouri Region.

Specific

1. There are portions of two strip mining tracts that cover certain areas of land Water and Power Resources Service has withdrawn for the Juniper Project in Colorado. Part of the Bell Rock tract takes in the Service's withdrawn land, Sec. 30, Lot 8, T. 6 N., R. 91 W., 6th P.M., Colorado. The Iles Mountain tract encompasses the Service's land as follows: Sec. 3, Lot 17; Sec. 10, Lot 3, NE¼, SE¼, NW¼; Sec. 11, S½, NW¼—all in T. 5 N., R. 92 W., 6th P.M., Colorado. Also, we are enclosing a copy of the Service's withdrawal which contains special language concerning mining claims.

F. Phillip Rogers

Enclosure

cc: Director, Office of Environmental Project Review, Office of the Secretary, Department of the Interior, Washington, D. C. 20240
Commissioner, Attention: 150
(w/c enclosure to each)

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SUPERCEDED BY SUBSEQUENT LETTER

57

OFFICE OF THE SECRETARY OF TRANSPORTATION

WASHINGTON, D.C. 20590

15 JUL 1980

MEMORANDUM FOR: Dan Martin, Team Leader
Bureau of Land Management

SUBJECT: Draft Environmental Impact Statement
Green River-Hams Fork
Regional Coal

The following comments are submitted on the draft Green River-Hams Fork Regional Coal environmental impact statement (EIS) regarding transportation matters.

1. The draft EIS does not include an analysis of impacts of the action on the transportation system beyond the regional boundaries or the related impacts on the surrounding environment of the increased use of these transportation facilities. We believe that such an assessment must be developed for the various alternatives under consideration.

2. The transportation requirements for each alternative should be discussed and analyzed. Would rail and highway construction be required? If so, how much and where, in general terms? What would be the impacts on coal production if rail and highway limitations did not enable the coal to move to market?

3. What are the mitigation needs for each alternative's "downline" transportation impacts? A range of transportation improvements which may be necessitated — such as additional rail and highway construction, relocation, improvements of bridges, and new highway-rail grade crossings or eliminations should be discussed and analyzed. Other concerns that warrant analysis include possible increased rail and highway noise in residential or recreational areas, visual intrusion, and impacts on archaeological and historic resources.

The Bureau of Land Management's Coal Leasing Program has the potential for significant impacts on areas outside the leasing region. We look forward to reviewing the final EIS with a more definitive assessment of the transportation-related impacts of the proposed action..

Thank you for the opportunity of reviewing the draft statement.

Martin Convisser, Director
Office of Environment and Safety

cc:

Bruce Blanchard, DOI

SPEED LIMIT 55
It's a law we can live with.

STATE OF COLORADO

COLORADO NATURAL AREAS PROGRAM
Department of Natural Resources
1313 Sherman Street, Room 718
Denver, Colorado 80203

Phone (303) 839-3311

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JUL 08 1980

DIV. OF PLANNING

Richard D. Lamm
Governor

Harris D. Sherman
Executive Director

Carol J. Pustmueller, Ph.D.
Program Director

MEMORANDUM

To: Dan Martin, EIS Team Leader, Colorado BLM

From: Carse Pustmueller, Director, Colorado Natural Areas Program CP

Date: July 7, 1980

Re: Comments on the Green River-Hams Fork Regional Coal EIS

The Colorado Natural Areas Program is responsible for identifying, evaluating, and protecting, among other areas, land having populations of rare plants in Colorado. As such, the Program's review and comments on the Green River-Hams Fork Regional Coal DEIS pertain only to the section on Threatened and Endangered Plants (page 188, Part I).

The Natural Areas Program is in the process of identifying all known localities of federally listed T/E, federally proposed T/E and state proposed T/E species of plants occurring on land in Colorado, regardless of ownership. These data are systematically incorporated into a data management system which includes computerized and manual files, in addition to exact localities on 7.5' topo maps.

According to these data, no known localities of any of the four federally listed species of cacti occur within or near any of the tracts included in the DEIS. However, we appreciate that BLM has officially contacted the U.S. Fish and Wildlife Service in Salt Lake for formal consultation under Section 7.

There are, however, populations of some species of plants which have been proposed for federal or state T/E status which may well occur within or near some of the tracts covered in the DEIS. A list of potential species, with general localities and brief ecological descriptions is attached to this memo and should be considered an integral part of these comments. This list includes species that were listed in the July 1, 1975 Federal Register, which list was officially inactivated November 10, 1979. Plans are for a new proposed USFWS listing to appear in the Federal Register within the month. We suggest that BLM consider the following comments and address these issues in the final EIS:

1. Continue as planned in DEIS on the officially listed T/E species of plants.

2. Request consultation from the Natural Areas Program on those species of plants which were on the discontinued proposed list, and which are known or suspected to have populations within or near the coal tracts proposed in the DEIS. According to the December 10, 1979 Federal Register (pertinent section is attached), the plants on the discontinued list should be considered in environmental planning until release of a new proposed list.

 We have identified the pertinent species as:

 Cryptantha stricta
 Oxytropis obnapiformes
 Astragalus wetherilli
 Eriogonum viridulum
 Phacelia formosula
 Astragalus detritalis

 However, some or all of these species may not appear on the new proposed list (see #3 below).

3. When the new proposed list is made public in the Federal Register (which should happen in the very near future), BLM should consult directly with the Colorado Natural Areas Program for: (1) identification of those species on the new list which are known to occur within or near a proposed tract; and (2) exact locality information on known occurrences of plants so identified.

 CNAP currently has a cooperative agreement with the USFWS to collect data on 25 high priority rare plant species in Colorado. The data collection is being done in the field this summer and pertinent reports will be presented to USFWS in the fall. In the meantime, USFWS is using CNAP to obtain information needed for its consulting requests. In addition to the original research being performed this summer, CNAP (through the Natural Heritage Inventory) is gathering known information on "special" plants from all over the state. Therefore, we may be able to provide information which will be available nowhere else, or which is otherwise scattered.

4. After species have been identified to BLM through steps 2 and/or 3 above, BLM should take responsibility for performing 100% ground surveys by a qualified field botanist to locate any populations of the identified species before any ground disturbance occurs on any tract which may provide habitat for the identified species.

5. If, through the process described in #4, a population of a species identified in #2 or #3 is found within a proposed coal tract, BLM should follow mitigation measures:

 a. Document the population's existence prior to initiation of surface disturbance;

 b. Spare the population if at all possible;

 c. Gather seeds and attempt to plant a new population in another site having the same ecological parameters: associated plant community, soil types, climate, moisture, etc. This mitigation effort would be acceptable only if research in transplanting of the species has proved successful.

 d. If knowledge of transplanting the species in question is not known, BLM should purchase, or trade lands to acquire another habitat where a population of the species in question is absolutely known to occur. Management and use of the newly acquired property should be such that the population will be protected in perpetuity and through designation as an area of Critical Environmental Concern (BLM process) and serious consideration for designation as a state Natural Area.

6. In relation to the mitigation measures above, please clarify the last sentence of the first paragraph on page 188. What "appropriate" measures would be taken to alleviate impacts if populations of rare plants are found in any proposed tracts?

7. The following Uncommitted mitigation measures (pages 188-189) should be classified and dealt with as committed mitigation measures in the final EIS: 1, 2, 4, 5, 6, 7, 8. Note that number 8 parallels step 4.

8. Consult with Natural Areas Program to identify those species of plants occurring on the proposed State-sensitive list, and to identify known localities of populations of these species. Whenever possible, BLM should apply steps 4 and 5 above, to those populations known to be adversely impacted.

9. Include, within the discussion on Description of the Environment, (pages 67-70) mention of proposed federal and state T/E plants in the appropriate vegetation types.

These comments and recommendations have evolved primarily from the following facts and logic:

1. U.S. Fish and Wildlife, Washington, D.C. office, is encouraging federal consultations on those species of plants which are on the 1976 proposed listing until the new proposed list is published in the Federal Register, and will advocate consultation on all species on the new list when it appears. This new listing will appear during BLM preparation of the Final EIS. Please consider our comments as they relate to the new list.

2. Several species of plants on the old list which were not listed, are still eligible for federal or state E/T status. Many species were not, and have not been federally listed, due to the lengthy process involved. The same degree of protection for all proposed (candidate) plants should parallel the consultation and protection practices afforded officially listed species, until the actual status of the proposed species is determined.

3. According to NEPA (1502.16), the EIS section on Environmental Consequences must include, among other things, discussions of

 a. "Possible conflicts between the proposed action and the objectives of . . . State land use plans, policies and controls for the area concerned." (1502.16(c))

 b. "Natural or depletable resource requirements and conservation potential of various alternatives and mitigation measures." (1502.16(f))

In order to be in agreement with State (Natural Areas Program) policies on the protection of rare plants in Colorado, BLM (1) must consider the proposed federal and state E/T plants, in addition to the officially listed E/T plants, in the final EIS, and (2) must follow the 9 steps outlined on pages 2-3 of this memorandum. Furthermore, the proposed state and federal E/T plants should be considered, if not within the section on Endangered and Threatened Plants, at least in the section of Vegetation (both in "Description of the Environment" and in "Environmental Consequences"). Since these proposed federal and state species comprise the "sensitive" plants in Colorado they should definitely be included as that part of the vegetation analysis which most demands attention in the EIS on the conservation potential of various alternatives and mitigation measures.

In conclusion, please find, as an attachment to this memo, the BLM policy on Conserving Rare, Threatened, or Endangered Plants on Public Lands in California. The California BLM policy parallels Colorado's emerging State policy on plants and I suggest that BLM seriously consider development of and adherence to a policy which parallels that of California.

STATE OF COLORADO RICHARD D. LAMM, Governor
DEPARTMENT OF NATURAL RESOURCES
D. MONTE PASCOE, Executive Director
1313 Sherman St., Room 718, Denver, Colorado 80203 839-3311

Board of Land Commissioners
Division of Administration
Division of Mines
Division of Parks & Outdoor Recreation
Division of Water Resources
Division of Wildlife
Geological Survey
Oil and Gas Conservation Commission
Soil Conservation Board
Water Conservation Board
Mined Land Reclamation

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July 7, 1980

Mr. Charles W. Luschsr
Acting State Director
Bureau of Land Management
1600 Broadway, Suite 700
Denver, Colorado 80202

80 JUL 10 A7:45

Dear Bill:

Enclosed are the comments of state agencies on the Draft Environmental Impact Statement on federal coal lessing in the Green River-Hams Fork Region. I would like to highlight three points.

1. The preparation of this EIS, like other aspects of this lease sale, has been conducted under extremely tight, unrealistic time schedules. Although there are some problems with the Draft EIS, your staff is to be congratulated for their effort and for the generally good work they have done. The inclusion of sections on "uncommitted mitigation" and the thoughtful approach to committed mitigation are highlights of the Draft. As the Draft suggests, many of the uncommitted mitigating measures are within BLM's authority and would be effective in softening environmental and socio-economic impacts. I expect you will be translating these measures into committed mitigation via lease stipulations, and I am directing my staff to work with you on this.

2. The driving force behind the proposed action is the Department of Energy's projections of coal demand in 1985-90. As you are well aware, there has been widespread criticism of the computer model used by DOE and of the assumptions employed for the most recent run of the model. I am hopeful that the Department of Energy will provide more information about its "black box" computer model, make improvements in the model as suggested by an open discussion, and update the assumptions prior to selection of a final target for the Green River-Hams Fork Region. If these steps are not taken, Interior should shoulder the responsibility for adjusting the regional lease target as required rather than simply accepting DOE figures.

3. The baseline figures--of projected levels of coal production in 1987 without additional federal leasing--are apparently substantially in error in the Draft EIS. Given the fact that this is the first EIS in the new coal management program, it would be desireble to correct these figures for the Final EIS.

If you have any questions on the comments encloeed, pleeee do not hesitate to contact the state agency involved and my office.

Sincerely,

MONTE PASCOE
Executive Director

DMP:cer
Enclosure

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STATE DEPARTMENT OF HIGHWAYS

JACK KINSTLINGER — EXECUTIVE DIRECTOR

DIVISION OF HIGHWAYS
E. N. HAASE
CHIEF ENGINEER

COLORADO STATE PATROL
COL. C. WAYNE KEITH,
CHIEF

4201 EAST ARKANSAS AVENUE • DENVER COLORADO 80222 • (303) 757-9011

May 30, 1980

JUN 06 1980
DIV. OF PLANNING

Mr. Philip Schmuck, Director
Colorado Division of Planning
1313 Sherman Street, Room 520
Denver, Colorado 80203

Dear Mr. Schmuck:

The Colorado Department of Highways has completed its review of the Green River-Hams Pork Draft Environmental Impact Statement prepared by the U.S. Department of the Interior. Our comments are offered below.

During the past six months the Department of Highways has served in an ex-officio capacity on the Green River-Hams Fork Regional Coal Team. Due to our involvement throughout the process we feel that the impacts which can be expected as a result of the proposed action have been adequately identified. Given that there is general agreement on the nature of the anticipated impacts it is now time to concentrate on the development of effective impact mitigation programs.

On page 218 of the subject document the transportation impacts section turns to a discussion of "Uncommitted Mitigation". This section indicates that BLM is prepared to include stipulations regarding the transportation of coal and people as a part of the lessees' leases. We applaud this apparent commitment by BLM.

The Department of Highways in conjunction with the Department of Natural Resources has discussed the need for effective impact mitigation programs throughout the development of the Green River-Hams Fork Coal Leasing Program. As a result of these discussions we have developed a proposed lease stipulation which is attached. We feel that our proposed lease stipulation provides the basis for the eventual lessee, the Department of Highways, and the effected local jurisdictions to develop a mutually beneficial impact mitigation plan. We would be willing to meet with any interested parties, particularly BLM, to further discuss the issue of lease stipulations at any time.

One other minor point that requires comment is the citation on page 4 that the increased road maintenance costs attributable to coal

haul activities are $0.014 per ton mile. This figure was derived from a study entitled Where We Agree: Report of the National Coal Policy Project released in 1978. Since the $0.014 per ton mile figure was not developed using Colorado data it should be accompanied by the appropriate citation.

If you have any questions or comments please do not hesitate to contact this office.

Very truly yours,

JACK KINSTLINGER
Executive Director

Attachment

PROPOSED FEDERAL COAL LEASE STIPULATION CONCERNING TRANSPORTATION

In order to insure that any movement of coal on public roadways will have a minimal impact on such roads' structural integrity and capacity, the following stipulation is proposed.

That prior to any certification by BLM that the lessee has met the conditions of the lease, the following must be accomplished.

1. The lessee must provide information concerning the extracted resource to its primary transportation mode (i.e., the closest railroad). Such information shall include the mode(s) to be utilized, the route and frequency of trips. Such information shall also include a discussion of the construction of additional transportation facilities (i.e., railspurs, conveyors) if they are contemplated.

2. Based on the above information the lessee shall prepare an analysis of the immediate impacts and long term effects of such product movements on the public roadwey(s). The analysis shall include consideration of the impact of any truck movements on the rate of roadway pavement deterioration, the design life of the facility, the roadway's level of service and the overall safety of the motoring public. The analysis shall also include discussion of those measures such as proper signing, lighting, and design of access to and from public roadways that can mitigate the identified impacts. The lessee and the effected units of government shall also develop a statement of perceived roles and responsibilities on behalf of the lessee, the Colorado Department of Highways, and effected local jurisdictions.

3. Upon completion of the above, the Department of Highways and the effected local jurisdictions shall review, comment, and approve the identified impact mitigation actions. Approval shall be based upon the adequacy of the analyses, conformance with accepted design standards, and the reasonableness of the proposed actions.

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United States Department of the Interior

GEOLOGICAL SURVEY
RESTON, VA. 22092

In Reply Refer To:
EGS-Mail Stop 760

JUL 24 1980

Memorandum

To: Dan Martin, Bureau of Land Management

From: Chief, Environmental Affairs Office
Office of Earth Sciences Applications

Subject: Green River-Hams Fork Draft Environmental Statement

The subject draft environmental statement has been reviewed as requested. Formal comments were not sent since contributions to the EIS were made by USGS task force personnel. However, informal comments, largely on areas of U.S. Geological Survey technical expertise, have been sent under separate cover. A copy of those comments are attached. We hope the comments will be helpful in completing the FES.

Any questions regarding the comments should be addressed to Clifford A. Haupt at FTS 928-6464.

for Daniel B. Krinsley

Enclosure

One Hundred Years of Earth Science in the Public Service

4) Part 1, Alternetives, 3, "required authorizations" should read "...Diligent development requirements, maximum economic recovery (MER) and lease ecreege restrictions..." Last paregraph should read "...OSM and USGS rules and reguletions" and "this plen must be approved by the Assistant Secretary--Energy and Minerals prior to beginning mining operetions."

5) It should be indicated thet reserve estimates in teblas 2-4, 2-7, 2-10, and 2-13 mey change as new information becomes aveileble prior to sale.

6) Part 1, Purpose and Need, pp. 9-11, another item should be addad to the effect thet, "there is a need to examine the potential existence of endangered and threatened flore and feuna in the region as required under the Endangered Species Act of 1973, as amended. This should be assessed for each alternative, not for just e few" (no action v. low).

7) Part 1, Alternetives, p. 10, Cultural Resources, add "sites" after "356 culturel resources..." and elsewhere as needed.

8) Part 1, Alternatives, p. 22, confusing as written. Suggest delating "affect the cultural resource."

9) The discussion on "existing attitudes end values," part 3, p. 99, is based on some highly questionable assumptions regarding community change.

10) The discussion in pert 2, app. D, Economics, is not synthesized and does not give the objective of the assessment or state specific or general conclusions; i.e., facility costs per unit of space needs, amount of money needed, etc.

We realize the tight time-frame you're operating under, end as such would defer on ell comments except 1, 4, and 5 end those comments not requiring substantiel reanelysis.

Dave
David Hoglund

United States Department of the Interior

GEOLOGICAL SURVEY
RESTON, VIRGINIA 22092

In Reply Refer To:
EGS-Mail Stop 760

30 APR 1980

Memorandum

To: Bob Sulenski, Bureau of Land Menagement

Through: Acting Chief, Preparation Branch Joel for Alt

From: David Hoglund, Geological Survey

Subject: Review of Green River-Hams Fork draft EIS

The following summarizes USGS comments on the above PDES, and duplicates those comments given to you at the meeting April 17, 1980.

1) The EIS uses the term LMU (logical mining unit) in a manner which could lead to confusion. Suggest that text point out that the discussion is of potential LMU's and not LMU's established by regulations which would consolidate non-Federal lands.

 Ann Vance (SOL), after discussion with Charles Rech (LCC), has indicated that reference to LMU's in 43 CFR 3475.5 be deleted.

We suggest you add either footnote:

 a) The term LMU used in this EIS refers to an area of consolidated non-Federal and Federel lands which could be mined es an economically viable mining unit. The term does not refer to an approved LMU established under 43 CFR 3400 or 30 CFR 211 regs. After issuance of the Federal lease, every lease becomes an individual LMU. The operator would then epply for consolidation of non-Federel lands or other Federal leases into a consolidated LMU; or,

 b) The term in this EIS refers to potential LMU's.

2) In order to be consistent with 43 CFR 3420 terminology, all references in part 2, app. A, should be changed from "high to medium" to "high to moderate" coal development potential.

3) Differences in format of the site-specific matrices of part 2 between Colorado end Wyoming make comparisons difficult. Suggest uniform format be esteblished. Matrices should also indicate breakdown of coal ownership acres as well es surface ownership.

In Reply Refer To:
EGS-Mail Stop 760

30 APR 1980

Memorandum

To: Acting Chief, Preparation Branch

From: David Hoglund, Quality Control

Subject: Green River-Hams Fork PDES compliance meeting

I ettended the subject meeting April 17, 1980, held at Interior headquerters. In attendance were Bob Sulenski, BLM; Chuck Rech and Pat Gaeham, Office of Coal Leasing Planning and Coordination; Tom Loomis, OEPR; Frank Mancinn, OSM; Ann Vance, Solicitor's Office; and myself.

I summarized CD and EIA comments end provided Sulanski with a draft of the attached memorendum. Because of the short meating time, the only comments I discussed in any detail involved logical mining units (LMU's), Maximum Economic Recovery (MER), and E&M rather than BLM approval. The lack of eny substantive comments on our part wes due partially to BLM's instructions advising me that the document had previously undergone extensive field review, but probably more significant was the short review time period. I received a copy of the 600 page document mid-eftarnoon of April 15, and shared the 1½ day review time with CD. In fact, because of copying and other logistic problems OSM did not have the opportunity to review the PDES.

Nevarthelass, the Regional Team did a timely and good job in preparing the document, which received tentative clearence to print from OEPR. Loomis' comments did not appear to cause BLM any significant problems. I had to leave early to catch a plane to Denver and was unable to obtain SOL's comments, if any. I'll contact Sulenski if these or any other problems will cause slippage in the BLM schedule.

DH
David Hoglund

Enclosure

cc:
Prep Chron
Prep Case w/encl.
L. Setlow w/encl.
S. Chiang w/encl.
D. Hoglund w/encl.
EIA Chron
Prep Rdg.

EGS:DHoglund:db:4/24/80 860-6464

United States Department of the Interior

GEOLOGICAL SURVEY
RESTON, VA. 22092

April 22, 1980

Memorandum

To: Chief, Preparation Branch

From: Chief, Review Branch

Subject: Review of Appendix B, Water Resources, in preliminary draft regional environmental statement for Green River/Hams Fork

The computation of consumptive use (item 2) indicates an assumed consumptive use of 125 gal/day/person (about 63 percent) of a treated water supply of 200 gal/day/person. On the basis of water data for the Missouri Basin region (North Platte River drainage) and Upper Colorado region (Yampa River drainage) in the report on Estimated Use of Water in the United States in 1975 (USGS Circ. 765), the percent of consumptive use is calculated to be significantly less, especially for water withdrawn for public supplies--Missouri Basin, 24 percent and Upper Colorado, 34 percent. (See page 33, table 12.) Water data for rural use (p. 34, table 13) suggests a higher percent of consumptive use (89 percent and 74 percent, respectively) for water withdrawn for combined domestic and livestock uses. The statement is not clear as to the specific information used for computing the assumed consumptive use. Also, a value of 200 gal/day/person from a treated water supply may be high for this area.

We suggest this matter be reconsidered.

We suggest also that the title page of the final document should indicate the kind of project, i.e., management of coal resources, and the states involved.

L. D. Bonham

Therefore, high density residential development in the Creston Junction area identified in this Impact Statement will be discouraged.

The exception to this general policy would be a "new town development". However, eight criteria for such development will need to be addressed prior to active consideration of such urban expansion. Therefore, the liklihood of urban growth at Creston Junction is doubtful at this time.

Three: A constant concern regarding any Impact Statement from our perspective has been the absence of a broader review of the development potentials anticipated in the general region. Specifically, the preferential coal lease of the Cherokee area and other pending industrial and mineral extractive activities in this Green River - Hams Fork area seems to be only provided a cursory examination in this Statement.

We are most concerned with the availability of WATER to support not only this level of future coal mining activities but also additional high water users (mineral and municipal users) anticipated throughout this region.

An examination of the cumulative impacts of development and the issue of water is warranted.

We appreciate the opportunity to comment on this Statement and hope our perspective will be helpful.

Very truly yours,

Robert Volcic

Robert Volcic, Chairman
Sweetwater County Planning & Zoning Commission

RV/va

cc: Mayor James Hennek
Town of Wamsutter

Jack Wilson, Sr., Chairman
Board of County Commissioners

Olena Buczacka, Town Planner
Town of Wamsutter

GREEN RIVER
(307) 875-2611 EXT. 270

ROCK SPRINGS
(307) 362-7870 EXT. 270

62

SWEETWATER COUNTY PLANNING DEPARTMENT
P. O. BOX 791
GREEN RIVER, WYOMING 82935

RECEIVED
JUL 10 1980
BUREAU OF LAND MANAGEMENT
RAWLINS DISTRICT

received COC via Bkr under 7/30/80

July 8, 1980

Mr. Fred Wolfe, District Manager
Bureau of Land Management
Rawlins District Office
P. O. Box 670
Rawlins, Wyoming 82301

Re: Green River - Hams Fork
Draft Environmental Impact
Statement (Coal)

Dear Mr. Wolfe:

The Sweetwater County Planning and Zoning Commission of Sweetwater County, Wyoming, reviewed the "Green River - Hams Fork Draft Environmental Impact Statement (Coal)" at our July 8, 1980 regular meeting. During our preliminary review, the following comments were raised:

One: In regards to Wamsutter Wyoming, we are in agreement with the revised population estimate (6-17-80) for this community. However, based upon the continuing impacts from oil and gas activity, a revision of future population would appear warranted. The potential of major coal and power generating activities in their area would further add impetus to a larger population.

In December 1979, THK Associates, Inc. forecasted Wamsutter's population to 1,486 persons by 1990 in their report entitled "Population Projection 1979-1980 Sweetwater County, Wyoming - Annual Update". We concur in this forecasting due to the projected cumulative mineral and industrial activities in the Wamsutter area.

Two: In accordance with the Sweetwater County Final Land Use Plan adopted June 1977 and amended November 1977, Sweetwater County's land use policies are ". . .to encourage the compact development of its communities and the provision of adequate community services for its urban residents".

63

STATE OF COLORADO
Richard D. Lamm, Governor
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF WILDLIFE
Jack R. Grieb, Director
[redacted]
711 Independent Avenue
Grand Junction, CO 81501

JUL 24 '80

July 16, 1980

Herb Conley
Wildlife Biologist
Bureau of Land Management
Box 1136
Craig, CO 81625

RE: Application of Criterion 10 for Green River/Hams Fork

Dear Herb:

Staff biologists have reviewed potential conflicts between coal lease tracts and State threatened end endangered species habitet. Only one potential conflict was identified in this review and that is e possible conflict with greater sandhill crane (Grus canadesis tabida) neats near the Bell Rock tract.

It is our conclusion that adverse impacts on sandhill cranes could be avoided if no surface activities occur on this tract in the period of 1 May through 1 July of eny calendar year.

As you know because of the over-laps between State and Federal threetened and endangered specialists, ell other State species were considered by your egency end Fish and Wildlife Service for application of unauitability.

We will advise you of any other findings or conclusione which may come to light ee we continue our consideration of this coal leasing effort.

Cordially,

Perry D. Olson

Perry D. Olson
Regional Manager

xc: D. John
A. Whiteker
T. Lytle
GR/HF file

vm

DEPARTMENT OF NATURAL RESOURCES, Harris Sherman, Executive Director • WILDLIFE COMMISSION, Michael Higbee, Chairman
Wilbur Redden, Vice Chairman • Sam Caudill, Secretary • Jean K. Tool, Member • Vernon C. Williams, Member
James Smith, Member • Donald Fernandez, Member • Richard Divelbiss, Member

64

United States Department of the Interior
FISH AND WILDLIFE SERVICE

WAILING ADDRESS
Post Office Box 25486
Denver Federal Center
Denver, Colorado 80225

STREET LOCATION
134 Union Blvd
Lakewood, Colorado 80228

FA/SE/BLM--Green River-
Hams Fork Region
(u-5-80-F-329)

'80 Jul 25

MEMORANDUM

TO: State Director
Bureau of Land Management, Denver, Colorado

FROM: Regional Director, Region 6
U.S. Fish and Wildlife Service, Denver, Colorado

SUBJECT: Biological Opinion for Leasing of Green River-Hams Fork Coal Tracts, Colorado

This is our biological opinion in response to your memorandum of April 9, 1980, in which formal consultation was requested. Your memorandum requested consultation on the expected impacts of coal development on listed plants and animals for part of the Colorado area of the Green River-Hams Fork coal program. A biological opinion for the Wyoming portion of the Green River-Hams Fork coal program was issued on February 22, 1980. This biological opinion was prepared pursuant to the Section 7 interagency Cooperation Regulations (50 CFR 402, 43 FR 870) and the Endangered Species Act of 1973, as amended.

BIOLOGICAL OPINION

The proposed leasing action is not likely to jeopardize continued existence of the bald eagle (Haliaeetus leucocephalus), black-footed ferret (Mustela nigripes), spineless hedgehog cactus (Echinocerus triglochidistus var. inermis), Uinta Basin hookless cactus (Sclerocactus glaucus), Colorado squawfish (Ptychocheilus lucius), humpback chub (Gila cypha), and bonytail chub (Gila elegans). The proposed action may slightly impair the quality of the aquatic habitat for the endangered fishes, but not to the extent that likelihood of their recovery would be appreciably diminished.

CONSERVE AMERICA'S ENERGY

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PROJECT DESCRIPTION

The Secretary of the Interior set a coal leasing target in 1979 for the Green River-Hams Fork supply region of 520 million tons. In order to meet this goal, the proposed action involves leasing coal tracts in the Green River-Hams Fork region of Wyoming and Colorado. Leasing alternatives vary from 5 tracts in Wyoming and 5 tracts in Coloredo (low alternative), to 5 tracts in Wyoming and 11 tracts in Colorado (high alternative). Leasing would begin in 1981 and mine development in 1987. Full production would be reached in 1990. The leasing decisions to be made are discussed in the Green River-Hams Fork draft Environmental Impact Statement (EIS) issued by the Bureau of Land Management (BLM) in April 1980. In the future, more decisions will be made as to whether to lease more Federal lands for coal extraction both within the Green River-Hams Fork coal supply region and other regions as well.

FUTURE CONSULTATION

Responsibility for the Federal Coal Program is shared by several agencies. The Office of Surface Mining (OSM) has responsibility that extends throughout planning, mining, and reclamation. At this stage in the leasing process, we cannot assess the exact extent of the expected impacts of coal mining on proposed and listed species. For this reason, this biological opinion is limited to addressing the impacts in a generalized way. We are sending OSM a copy of this opinion and asking that agency to consult with us later if specific facts reveal that mining would affect listed species.

BASIS OF OPINION

BALD EAGLE

An estimated 500-800 bald eagles winter in Colorado from October through April. They are common winter residents along much of the Yampa River. Proximity to a food source is probably the most important factor influencing selection of daytime perches by eagles along the Yampa River. Riparian zones along the river provide eagles with roost sites in areas where prey exist and other perches are few. Eagles prefer tree perches over other types of perches and most tree perches selected are bordered by an open area. Impacts of this leasing action on roost sites would be minimal due to BLM's unsuitability criteria which prevents trees within 0.25 miles of each side of the river from being removed. Lands within 0.25 miles of either side of the river have been designated unsuitable for coal mining because of their high environmental value. The following areas were deemed unsuitable for mining during BLM's application of unsuitability criteria: T6N, R87W, all of Section 30; T6N, R92W, NE¼ of Section 25; T5N, R91W, N½NW¼, SW¼NE¼ of Section 8; T5N, R92W, all of Section 3; and T5N, R92W, all of Section 11.

According to BLM's bald eagle inventory, leasing of the areas around Bell Rock, Iles Mountain, and Empire would most likely impact bald eagle roosting and feeding areas. The impacts to the feading areas are expected to occur

northwest of Bell Rock and on the Iles Mountain site. Impacts to the roost sites would be minimal because no surface disturbance would occur in the 0.25-mile buffer zone.

The feeding habits of wintering bald eagles in Colorado are diverse, with fish, waterfowl, jackrabbits, and carcasses of big game comprising most of their diet. The extent of impact (on feeding in particular) can only be determined after continued monitoring of eagle use in conjunction with more detailed information on specific mining activities.

Recommendations

The primary purpose of managing bald eagles in Colorado is to provide them with their necessary wintering habitat requirements so they can return to the breeding range in the healthiest condition possible. This requires maintaining and enhancing suitable habitat throughout the winter range. Existing and potential wintering areas should be protected along the Yampa River.

We are aware of BLM's statewide bald eagle inventory designed to locate eagle concentration areas on BLM administered land in Colorado. We encourage BLM to continue these inventories along the Yampa River. This data provides information on annual and seasonal changes in eagle populations at specific sites. Knowledge of roost sites and forging areas will allow for proper planning of activities to minimize disturbance to wintering eagles. This data will also become increasingly important as energy related developments place additional pressure on riparian zones. Communal roosts are focal points for bald eagle activity and may be used for many years. Consequently, it is important to protect communal sites from coal mining and other human disturbance.

If BLM or OSM learns additional facts about expected impacts which either agency can control, the appropriate one should request consultation. Again, this is especially important because of the early conceptual stage at which decisions to lease must be made.

BLACK-FOOTED FERRET

Based on the best available information to date, the black-footed ferret has never been reported in the coal leasing tract areas. However, the ferret's historic range includes the areas proposed for mining. In addition, prairie dog towns occur in the tract areas and prairie dogs and their colonies provide a major food source and shelter for the black-footed ferret.

Recommendations

Because of the secretive nature of the ferret and the fact that it feeds almost exclusively on prairie dogs, we recommend BLM require the lessee to survey all prairie dog towns for ferret signs before coal mining begins.

If ferret signs indicate the presence of ferrets is likely, Section 7 consultation must be reinitiated. We refer you to the Black-Footed Ferret Recovery Plan for techniques of conducting ferret surveys.

COLORADO SQUAWFISH, HUMPBACK CHUB, AND BONYTAIL CHUB

The primary area of concern in this biological opinion is the Yampa River, a tributary of the Green River, from its headwaters downstream to the confluence of the Green and Yampa Rivers. The flow of the Yampa River is extremely important to the flow of the Green River, providing approximately 48 percent of the entire Green River flow in an average year and greatly ameliorating adverse conditions in the Green. In particular, cool water released into the Green River from Flaming Gorge Reservoir is warmed by flows entering from the Yampa. Also, flow fluctuations created to generate electrical power during peak demand periods are dampened by Yampa River flows. Both ameliorating effects are beneficial to the listed fishes.

The changes in water quality and quantities resulting from the mining of the site specific coal tracts described in the draft EIS can be considered significant and detrimental to the aquatic environment and the endangered fishes, but are not likely to jeopardize continued existence of the Colorado squawfish, humpback chub, or bonytail chub.

The Colorado squawfish, humpback chub, and bonytail chub once were abundant throughout the Colorado River System from the Gulf of California to southwestern Wyoming. Presently the squawfish is limited to the upper mainstem and major tributaries of the Green and Colorado Rivers. The humpback chub and bonytail chub are found only in limited areas within the river system in Colorado, Utah, and Arizona. The bonytail chub also occurs in Lake Mohave and the Colorado River below in Arizona. The primary cause of decline for the three native species is human alteration of the aquatic environment. Major impoundments and water diversions have depleted water and altered water temperature, turbidity, and stream flows, greatly reducing habitat for the listed fishes.

A less important cause of decline may be the increased number of exotic fishes. This increase in exotics is also a function of habitat changes which under certain conditions favor exotic fishes over native species. Although correlations exist between declining native fish populations and increasing populations of exotic fish, cause and effect are not fully understood. However, we believe that fewer exotic fishes would be present if the river more closely resembled its natural state.

Although we do not know all the specific life history requirements and distributions of the Colorado squawfish, humpback chub and bonytail chub, we are rapidly gathering additional information on these three species. Knowledge of these fishes has been limited partly because they, like most rare species, have been of little interest to society until recent years. Also, these fishes are difficult to capture or observe because the waters they inhabit are usually swift and turbid, and access is limited for many of the canyon reaches.

Information concerning the listed fishes is being gethered by the Coloredo River Fisheries investigetion Team established in April 1979. This team is staffed with Fish and Wildlife Service (FWS) personnel eod has fundiog from FWS, Weter end Power Resources Service (WPRS), and BLM. Other participants ere tbe Utah Division of Wildlife Resources (UDWR) and the Colorado Divisioo of Wildlife (CDOW). The team is conducting en intensive study of the fishes in the Green end Colorado Rivers with some dete being gethered on the major tributaries. Major objectives of the study are to learn speeifle life history requirements and behaviorel espects of the listed fishes. Information obtained during the study vie field, laboretory, and hatchery work will make it possible to provide speclfic recommendations to produce and maintain more fevorable habitet for the listed fishes in the Green end Coloredo Rivers.

According to the EIS, flows in the Yampa River wlii be reduced by epproximately 712 ecre-feet annualiy, considering maximum development of the coei mines and the increased water use by the associated growth in populetion. The monthly reduction in flow of the Yampe River will vary from month to mooth and will range from an undetectabie volume during runoff periods to approximately 2.5 percent of the flow of the River (from Craig to Maybeli) during lete summer and fell, depending on the water year and the mooth. Low-flow periods will be proionged and conditions will be worsened by the increesed domestlc use during late summer and fall. in 1977, an unusuaiiy dry year, flows beiow Maybell during the summer dropped to a low of 22 cfs. Under such condltions e reduction of 1 to 2 cfs (epproximate reduction in flow based on an annual depietion of 712 ecre-feet) in the Yampa River can be considered significant and detrimentel to the listed fishes.

Along with reduced flows during low-flow periods, the increased sewage pollution to the river as e result of the increased human growth at Creig and Hayden could create severe eutrophicetion and low biologicel oxygen demand io the equatic system. The EIS states that during the low-flow period in 1977, 50 to 60 percent of the Yampa River flow would have been sewege effluent from Craig and Hayden. Degradation of the aquatic habitat from increased sewage effluent can be vlewed as e dlrect lmpact to the ilsted fishes. However, under other than low-flow conditions, the increase in sewege pollution from the associated domestlc growth would not pose a serlous threet to the endangered fishes or the aquatic habitat beceuie of dilutlon by the normal or higher flows of tbe Yampa River.

Colorado squawfish have been collected as far up river as Craig, Coloredo, and are consistentiy captured above Maybell. The humpback chub and bonytail chub have been collected in the Yampa River neer the confluence with the Green River, and are believed to inhabit the lower canyon sections of the Yampa. CDOW will intensively sample the canyon sections this year for evidence of humpback chubs and bonytail chubs.

It is not known if spawning occurs in the stretch of the Yampa River between Maybeli and Creig. However, it is our opinion that, if spawnlog does occur, the impacts from reduced flows during low-flow months (July-October)

and increased water pollution could limit spawning, egg survival, and the recruitment of young-of-the-year fish. in addition, fish could be stranded in small pools end backwaters during receding flows, making them more susceptible to disease and parasites. Also, factors such es reduced food supplies, increased predation, end human disturhances could effect survival of the llsted fishes from overcrowded conditions.

Other water cooditloos associated with reduced flow are increases in water tempereture and selinity. Water temperatures during low-flow periods may slightly increase. During natural low-flow periods (summer-fall), water temperatures will be influenced more by amblent air temperatures and irrigation return flows than by a reduction of 1 cfs in the river's fiow. Furthermore, since changes in water temperature would be a warming of the rlver, it is our opinlon the changes would not be detrimentel to the fishes because they ere werm-weter creetures adapted to extremes in weter temperature. The EIS states that increases in saiinity would range from 0.06 mg/1 in 1987 to 0.20 mg/1 considering long-term maximum mining development. The endangered fishes are found in the Colorado and Green Rivers where saiinity ranges from 210 to 1700 mg/1. Therefore, although changes in water quelity conditions often limit spewning and distribution of native warm-water fishes, we believe that increases in salinity and temperature will not be as limiting to squawfish, humpback chub, and bonytail chub as the actual loss of water.

Recommendations

The ESA not only is designed to ensure survival of listed species, but also is intended to facilitate population increases so these species can be removed from protective status. Section 7(a)(1) stetes that all Federal agencies shall utilize their authorities in furtherance of the purpose of this Act hy carrying out programs for the conservation of endangered and threetened species. Although it is our opinion that this actlon is not likely to jeopardize continued existence of the listed fishes, we ask that you carry out the following recommendations fur the conservation of the species.

We recommend that before indlvidual coal trect leases are granted, BLM pursue the possibility of having a minimum base flow release from upstream reservoirs to insure a constant 20 cfs flow below Craig. According to BLM, the Colorado Weter Conservancy District (CWCD) controls weter in Yamcolo Reservoir and is planning to release water from the reservoir to provide a 20 cfs base flow. Such a release from the reservoir, combined with irrigation return flows along this stretch of the Yampe Rlver drainage, should provide sufficient flows below Creig and Maybeil to insure survival of the listed fishes.

We are assuming thet 1985 sewage effluent standards will be met by the various communities discharging waste into the Yampa River. However, we recommend thet BLM work with the Environmental Protection Agency (EPA) to insure the cities do adopt the 1985 effluent standards. If 1985 standards for sewage effluent ere met and e base flow from Yamcolo Reservoir is assured, the negetive impact to the endangered fishes from the coal mining and increesed domestic growth would be mioimized, if not eiiminated.

BLM should take the lead with EPA and CWCD to insure that the above recommendetions ere followed to minimize the overall impact to the endangered fishes.

SPINELESS HEDGEHOG CACTUS and UINTA BASIN HOOKLESS CACTUS

Suitable habitat for the two listed cacti are known to exist in the coel lease tract areas. However, site specific tract surveys conducted by BLM failed to find either cactl in any of the areas to be mined. Therefore, it is our opinion that site specific impact would not occur to the two listed cactl. it is also our opinion that possible impacts to the cecti may occur from indirect activities associated with the mining such as construction of roads, railroads, and transmission lines. Because most of the indirect ectivities are only tentatively planned without any specific information regarding routes or corridor lines, BLM was unable to survey for the two cacti. Therefore, we recommend BLM require the lessee to provide information concerning ell associeted indirect mining actlvities that may impact the ilsted cacti. Then BLM should either do surveys or require the lessee to conduct surveys for the cacti. if the llsted cacti occur in the project area, then BLM should initiate Section 7 consultation with FWS.

This concludes our formal consultation. if projcct plans or conditions change, or if new endangered or threatened species are listed, consultetion should be reinitiated. If you have any questluns regarding recommendations made for the iisted species, please contact John Gill of the endangered species team in our Salt Lake City Area Office, (FTS 588-4430).

We appreciate your concern for endangered species.

cc: Regional Director
Office of Surfece Mining
Brooks Towers
1020 15th Street
Denver, Colorado 80202

Suggested References

Black-footed Ferret Recovery Team. 1978. Black-footed Ferret Recovery Plan. 148 pp.

United States Department of the Interior
FISH AND WILDLIFE SERVICE

MAILING ADDRESS: Post Office Box 25486 Denver Federal Center Denver, Colorado 80225
STREET LOCATION: 134 Union Blvd Lakewood, Colorado 80228

IN REPLY REFER TO
FA/SE/BLM--Red Rim/Chine Butte & Hanne Basin (6-1-80-F-60)

FEB 28 1980

MEMORANDUM

To: State Director, Bureau of Land Management
Cheyenne, Wyoming

From: Regional Director, Region 6
U.S. Fish and Wildlife Service, Denver, Colorado

Subject: Section 7 Consultation--Coal Leasing in the Red Rim/China Butte and Hanna Basin Known Recoverable Coal Resource Areas

This is the Fish and Wildlife Service's (FWS) biological opinion, prepared in response to your November 28, 1979, request for formal consultation on the effects coal leasing in USGS delineated tracts within the Red Rim/Chine Butte and Hanna Basin Known Recoverable Coal Resource Areas (KRCRA) will have on the black-footad ferret (Mustala nigripes) and effects leasing USGS delineated tracts in the Hanna Basin KRCRA will have on the bald eagle (Haliaeetus leucocephalus). We have examined the project in accordance with the Section 7 "Interagency Cooparation Regulations" (50 CFR 402, 43 FR 870) and the Endangered Species Act Amendments of 1978.

BIOLOGICAL OPINION

Black-footed ferret: It is the Service's biological opinion that coal leasing in the Red Rim, Chine Butte, Medicine Bow, Seminoe II, and Rosebud tracts (Red Rim/Chine Butte and Hanna Basin KRCRA's) is not likely to jeopardize the continued existence of the black-footed ferret. Our opinion is based upon current information derived from present techniques for locating ferrets. Our opinion may change should new information become available or new techniques for locating ferrets be developed.

Bald eagle: It is our opinion that coal leasing in the Medicine Bow, Seminoe II, and Rosebud tracts (Hanna Basin KRCRA) is not likely to jeoperdize the continued existence of the bald eagle.

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PROJECT DESCRIPTION

The proposed activity involves the leasing of strippable Federal coal reserves within tracts delineated under the leadership of the USGS in the Red Rim/China Butte and Hanna Basin KRCRA. The following acreages will be leased within each tract:

Red Rim Tract -	10,320 acres
China Butte Tract -	6,240 acres
Medicine Bow Tract -	4,960 acres
Seminoe II Tract -	1,440 acres
Rosebud Tract -	3,040 acres

General assumptions listed by BLM for the activity include the following. Competitive leasing over a 2-year period will begin in early 1981. A plan for mining and reclamation (M & R) would be submitted by the lessee within 3 years (1984) of the lease and would be approved by the Office of Surface Mining (OSM) within 3 years (1987) of the M & R plan submission. The construction phase would begin in 1987 and would be completed in 1989. Actual mining and production would begin in 1989.

BASIS OF OPINION

Black-footed ferret: Because coal mining has the potential to destroy complete prairie dog towns, it also has the potential to inflict strong adverse impacts on black-footed ferrets should they occur on the mine site or if their habitat is limited. The impacts of coal lesaing and resultant mining in the coal lease tracts to ferrets can adequately be assessed only if (1) it is known whether or not ferrets occur in the tracts or (2) the tracts are essential to the survival and recovery of the species.

Based on intensive black-footed ferret surveys within the above-mentioned tracts, conducted by FWS under BLM contract, the Service does not have any evidence to indicate that ferrets currently inhabit any of the tracts. No positive ferret sign was observed in over 116 man-hours of survey in the Red Rim and China Butte tracts. Four white-tailed prairie dog colonies (103 acres) and 48 Richardson's ground squirrel colonies (557 acres) were searched.

In the Hanna Review Area, 61 white-tailed prairie dog colonies covering 6,369 acres (range: 1-805 acres; average: 104 acres; burrow density: 5.7/acres) were searched (Martin pers. comm.). No ferrets were found. However, three ferret skulls were collected within the Hanna Basin KRCRA, indicating some historical importance of the area to the ferret. Should ferrets reestablish themselves, areas known to have had ferrets in the past may be the most likely areas for reestablishment to occur.

While the results of the surveys do not indicate the presence of ferrets on the tracts, they do not conclusively prove that ferrets are absent. Current techniques in locating ferrets are limited and their inadequacy must be recognized. Additionally, it may be possible for ferrets to reestablish themselves in the coal lease tracts between the time surveys were completed (1979) and actual mining begins (1989)--a 10-year period.

Leasing for coal will result in the loss of potential black-footed ferret habitat through the complete or partial destruction of white-tailed prairie dog towns. Because mining plans have not been developed at this time, it is impossible to predict the number and acreage of prairie dog towns that will be destroyed and their significance to ferrets.

Evidence from FWS ferret surveys indicates that ferrets may occur in almost any white-tailed prairie dog colony regardless of burrow density. Historic observations, ferret skulls, and scats have been found in white-tailed prairie dog colonies having burrow densities ranging from 3 to 39 per acre (Martin pers. comm.). With similar white-tailed prairie dog habitat scattered throughout much of central and western Wyoming, FWS has no evidence at this time to suggest that potential habitat loss in the coal lease tracts will appreciably reduce the likelihood of recovery of the black-footed ferret. While some potential ferret habitat will be destroyed, it can be expected that prairie dogs will reinvade undisturbed sites within the tracts. This reinvasion will compensate for some of the habitat loss in the coal lease tracts.

RECOMMENDATIONS

Based on the best information available at this time, we believe that leasing is not likely to jeopardize the ferret. However, to ensure that mining at some later date (as much as 10 years from now) does not jeopardize the ferret, we request that you carry out the following recommendations for its conservation.

1. Prior to the approval of a plan for mining and reclamation, the applicant identify prairie dog towns that will be impacted and conduct ferret searches on those towns that the Federal land management agency and FWS mutually agree should be surveyed. Surveys should take place during the period of May 1 to October 15, preferably July through September.

2. The appropriate Federal agency (BLM or OSM) should reinitiate formal consultation if these surveys locate black-footed ferrets or their sign. The consultation should determine whether or not certain areas are unsuitable for mining or recommend that appropriate stipulations be placed on the mining activity.

3. If ferret sightings or observations of their sign are made prior to leasing, BLM should reinitiate formal consultation.

Bald eagle: Aerial surveys by BLM, Water and Power Resources Service (WPRS) and FWS, and ground surveys by BLM have not identified any bald eagle nests on the tracts or adjacent areas. These surveys indicate that low numbers of bald eagles winter along Seminoe Reservoir and the Medicine Bow River. However, evidence of high concentration areas have not been identified. The spatial and temporal use of these areas vary depending on the amount of open water in winter.

Four aerial surveys conducted by BLM between December 13, 1978, and March 17, 1979, resulted in only seven bald eagles observed, five of which were sighted feeding together on a sheep carcass. WPRS conducted six flights between January and May 1979, covering the Seminoe Reservoir and Medicine Bow River up to the bridge crossing in T. 23 N., R. 82 W., Sec. 5. A total of 37 bald eagles were observed with counts ranging from 0 to 16 on each flight. Five flights during the winter of 1979-80, covering the Seminoe River and Medicine Bow River up to T. 24 N., R. 82 W., Sec. 35, resulted in 25 bald eagles counted. These counts ranged in number from 1 to 13 on each flight. No communal roosts were found as vegetation necessary for roosting is lacking in the area (Howell pers. comm.).

Because BLM has identified mining within a buffer zone of 2,000 feet from the Seminoe Reservoir and Medicine Bow River as unacceptable due to multiple use conflicts, we believe that mining will be far enough removed from aquatic areas that eagle use along them will not be significantly affected. The habitat of potential prey to be impacted by mining is small in comparison to adjacent undisturbed areas of prairie habitat. Thus the bald eagle's prey base should not be altered significantly.

To assure that mining does not preclude bald eagle use on the Medicine Bow River and Seminoe Reservoir, we recommend that BLM maintain the 2,000-foot buffer zone in the "Unacceptable By Multiple Use" category, as identified in the planning supplement to the Hanna Management Framework Plan.

This completes the formal consultation process on the effects coal leasing in the Red Rim/China Butte and Hanna Basin KRCRA will have on the black-footed ferret and bald eagle. If additional threatened or endangered species are listed or conditions of the proposed work change, consultation with the Fish and Wildlife Service should be reinitiated.

I appreciate your cooperation and interest in meeting our joint responsibilities under the Endangered Species Act.

James C. Gritman

JAMES C. GRITMAN

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Department of Energy
Washington, D.C. 20585

JUL 30 1980

Dan Martin, Team Leader
Bureau of Land Management
Craig District Office
P.O. Box 248
455 Emerson Street
Craig, Colorado 81625

Dear Mr. Martin:

This letter supercedes our letter dated July 3, 1980. We have reviewed Parts I and II of the Green River - Hams Fork Draft Environmental Impact Statement - Coal.

The Department of Energy supports the Preferred-Alternative to lease 753.65 million tons of Federal in-place coal reserves. However, while we support the Preferred Alternative we are concerned that this alternative will not be achieved.

A review of the environmental impact statement supports our previous comments and expressed concerns to the Department of the Interior, and to the Bureau of Land Management. Basically, we find that the best coal tracts will not be leased. Moreover, the selected tracts are not least cost coal tracts and do not have complete industry support for optimum tracts selection and coal production. Central to achieving the Preferred Alternative's goal of 753.65 million tons is the need to seek and consider industry's expressed interests. We are also concerned with the number of tracts requiring more studies and inventories before decisions can be reached on the unsuitability criteria. We appreciate that more information is often required to make a decision of this magnitude; however, we question if sufficient time is available to complete these studies and meet the scheduled sale date.

We have expressed these and other concerns in previous meetings with the Department of the Interior, Bureau of Land Management and Geological Survey personnel.

We believe that during the preparation of the final Green River - Hams Fork Environmental Statement that the Departments of the Interior and Energy should maintain a level of contact and cooperation that would insure achieving a level of leasing at the Preferred Alternative.

Sincerely,

Robert H. Lawton

Robert H. Lawton
Director
Leasing Policy Development
Resource Applications

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United States Department of the Interior
FISH AND WILDLIFE SERVICE

MAILING ADDRESS
Post Office Box 25486
Denver Federal Center
Denver, Colorado 80225

STREET LOCATION
134 Union Blvd.
Lakewood, Colorado 80228

IN REPLY REFER TO
FA/SE/Policy

AUG - 4 1980

MEMORANDUM

To: Duane Johnson, Craig District Office
Bureau of Land Management, Craig, Colorado

From: Regional Director, Region 6
U.S. Fish and Wildlife Service, Denver, Colorado

Subject: Terminology Used in the Endangered Species Program

Certain terms are being used loosely in the Endangered Species Program, resulting in considerable confusion. Consequently, I am providing definitions used by the Fish and Wildlife Service for some of the more abused terms. I hope these definitions will serve to increase our mutual understanding of the "endangered species language."

Candidate species--The status of the species is under review by the Service and has been published in the Federal Register under a Notice of Review. This category also includes species that appear in the Program Advice and species that were proposed and withdrawn because of the 2-year limitation. Species in this category have no legal status, not even for Section 7 consultation.

Endangered species--A Federally listed species that is defined as any species which is in danger of extinction throughout all or a significant portion of its range other than a species of the class Insecta determined by the Secretary to constitute a pest whose protection under provisions of the Act would present an overwhelming and overriding risk to man. The term "species" is defined as "any subspecies of fish or wildlife or plants, and any distinct population segment of any species of vertebrate fish or wildlife which interbreeds when mature."

Threatened species--A Federally listed species that is defined as any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range. Threatened species are provided full protection under the Act.

Proposed species--Species that are proposed by publication in the Federal Register for listing as Endangered or Threatened. Species in this category have no legal protection, except that they must be included in

species lists provided to agencies for construction projects and in biological assessments. Federal agencies are required to confer on the proposed species.

Below is a chart showing the general steps a species goes through before being listed.

FLOW CHART

NOTICE OF REVIEW (Published in FR)	→	PROPOSED (Published in FR)	→	ENDANGERED OR THREATENED (Published in FR)
Species becomes a candidate. No legal protection.		Species has been reviewed and the Service proposes to list as threatened or endangered. No legal protection except as stated above (Federal agencies required to confer).		Species is listed as Threatened or Endangered and has the full protection of the Act. Section 7 consultation required.

Some people have used the Federal, State, and Native Plant Society lists interchangeably. This also has caused great confusion. Although we welcome input from all sources including the various societies, other lists, particularly those provided by societies, can in no way be construed as being endorsed by the Service. Lists should be titled so that they cannot be confused with official Federal lists.

In late July or early August, a Notice of Review on plants is expected to be published in the Federal Register. The plants are expected to be placed in the following three categories:

Category 1 (Candidates)

Species that are currently under review and appear to be good candidates. In addition species thought to be extinct will have one asterisk and species extinct in the wild and thought to be cultivated will have two asterisks.

Category 2 (Candidates)

Species' status is insufficiently known; more information and research is needed.

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Category 3 (Noncandidatee)

Species that are deleted for the following reasons:

a. Definitaly extinct

b. Species is not a valid taxon

c. Speciae is more abundant or widespread than previously thought with no recognizable threats

If you have any questions regarding this matter, please call the Endangered Species Office at FTS 234-2496.

James P. Gitman

JAMES G. GILMAN

Advisory
Council On
Historic
Preservation

1522 K Street N.W.
Washington D.C.
20005

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PROGRAMMATIC MEMORANDUM OF AGREEMENT
AMONG THE
DEPARTMENT OF THE INTERIOR, BUREAU OF LAND MANAGEMENT,
OFFICE OF SURFACE MINING RECLAMATION AND ENFORCEMENT, AND
UNITED STATES GEOLOGICAL SURVEY,
AND
THE ADVISORY COUNCIL ON HISTORIC PRESERVATION
REGARDING THE FEDERAL COAL MANAGEMENT PROGRAM

WHEREAS, the United States Department of the Interior has a program to manage federally owned coal through leasing or exchange under the Mineral Leasing Act of 1920, as amended (30 U.S.C. 1B1, et seq.); the Mineral Leasing Act for Acquired Lands of 1947, as amended (30 U.S.C. 351, et seq.); the Federal Land Policy and Management Act of 1976 (43 U.S.C. 17D1, et seq.), which also charges the Bureau of Land Management with the management and protection of historic and cultural properties, the Surface Mining Control and Reclamation Act of 1977 (30 U.S.C. 1201, et seq.), which charges the Office of Surface Mining with the obligation to ensure that surface coal mining operations are conducted so as to protect the environment; and the Federal Coal Leasing Amendments Act of 1976, as amended (3D U.S.C., Chapters 3A and 7); and

WHEREAS, the United States Department of the Interior, Bureau of Land Management, administers public lands, including Federal mineral ownership, under concepts of multiple use and sustained yield and, among other responsibilities, the Bureau of Land Management is charged with assessing the suitability of Federal lands for coal leasing, with issuing leases for mining of federally owned coal, and with including terms in each lease to protect nonmineral resources, under the above authorities; and

WHEREAS, the United States Department of the Interior, Office of Surface Mining Reclamation and Enforcement (hereinafter Office of Surface Mining), is charged, among other responsibilities, with reviewing coal mine plans (which include an exploration plan covering exploration activities within a permit area) and recommending to the Secretary approval, disapproval, or conditional approval, with reviewing and approving minor modifications to mining and reclamation plans, with designating lands

unsuitable for surface coal mining operations or terminating such designations under a petition process, and with ensuring that surface coal mining and reclamation operations comply with certain lease terms and conditions, with approved permits, and with the provisions of the Surface Mining Control and Reclamation Act of 1977, which provides for the protection of historic and cultural properties on Federal lands (see 30 CFR 700.5 for definition of Federal lands); and

WHEREAS, the United States Department of the Interior, Geological Survey, is charged, among other responsibilities, with reviewing and approving coal exploration plans, with supervising exploration activities on Federal lands outside of a permit area, with reviewing the mining and operations portion of proposed mine plans, and with recommending mine plan approval, disapproval, or conditional approval to the Secretary; and

WHEREAS, the United States Department of the Interior, Bureau of Land Management, Geological Survey, and Office of Surface Mining have executed a memorandum of understanding implementing the division of functions and responsibilities regarding the Federal coal management program of the Department of the Interior; and

WHEREAS, Section 106 of the National Historic Preservation Act of 1966, as amended (16 U.S.C. 47Df), requires that the head of any Federal Agency having direct or indirect jurisdiction over a proposed Federal or federally assisted or licensed undertaking affecting properties included in, or eligible for inclusion in, the National Register of Historic Places shall afford the Advisory Council on Historic Preservation (hereinafter Council) a reasonable opportunity for comment; and

WHEREAS, coal leasing, mining, and exploration activities on Federal lands undertaken or regulated by the Bureau of Land Management, Office of Surface Mining, and Geological Survey may have an effect on properties included in, or eligible for inclusion in, the National Register of Historic Places and will require compliance with Section 106 of the National Historic Preservation Act; Section 2 of Executive Order 11593, May 13, 1971, "Protection and Enhancement of the Cultural Environment"; and the Council's regulations, "Protection of Historic and Cultural Properties" (36 CFR Part 800); and

WHEREAS, the Council has reviewed the Federal coal management program of the Department of the Interior; and

WHEREAS, Office of Surface Mining responsibilities for regulation of coal mines on non-Federal lands, including its relationships with State Regulatory Authorities under approved State programs, will be treated in separate agreements with the Council; and

WHEREAS, the Council and the Bureau of Land Management, Office of Surface Mining, and Geological Survey have met and reviewed their respective responsibilities under the Federal coal management program of the Department of the Interior and the relation of this program to compliance with Section 106 of the National Historic Preservation Act of 1966, as amended, including required integration with the National Environmental Policy Act of 1969 (36 CFR 800.9); Executive Order 11593, as implemented by the Council's regulations (36 CFR Part 800); and the responsibilities for historic and cultural resources under the National Environmental Policy Act of 1969 (42 U.S.C. 4321), as implemented by the Council on Environmental Quality in the "National Environmental Policy Act Regulations" (4D CFR Parts 1500-1508); and

WHEREAS, the Council's regulations, 36 CFR 800.8, provide for the development of Programmatic Memoranda of Agreement on a program or class of undertakings which would otherwise require numerous individual requests for comments;

NOW, THEREFORE, all parties mutually agree that the Bureau of Land Management, Office of Surface Mining, and Geological Survey will ensure, through the stipulations outlined in this Programmatic Memorandum of Agreement, that historic and cultural properties will be given adequate consideration in Federal coal management program decisions and implementation, which include, but are not limited to, the preparation of coal leasing environmental impact statements or environmental assessments, issuance of new leases, issuance of permits, inspection and enforcement activities, approval of exploration, and review and recommendations to the Secretary regarding plans for surface coal mining operations on either new or existing leases, thereby meeting the responsibilities of all parties under Section 106 of the National Historic Preservation Act.

STIPULATIONS

1. Preleasing

A. Land Use Planning

1. Prior to preparation of land use plans for areas of potential Federal coal leasing, the Bureau of Land Management will ensure that a Class I (existing data cultural resource inventory) and an appropriate level of Class II (land use planning sampling field cultural resource inventory) are conducted, as defined in procedures in BLM Manual Section 8111. Inventory results will be evaluated by the Bureau of Land Management, in consultation with the appropriate State Historic Preservation Officer, to identify properties included in, or eligible for inclusion in, the National Register of Historic Places. Documentation for properties which appear to meet National Register criteria will be forwarded to the Keeper of the National Register for a determination of eligibility pursuant to 36 CFR Part 63.

2. The Bureau of Land Management will apply coal leasing unsuitability criterion 7 (43 CFR 3461.1(g)) before completion of a land use plan. Pursuant to criterion 7, all properties included in, or eligible for inclusion in, the National Register of Historic Places (under paragraph 1 above), and an appropriate buffer zone, will not be considered further for coal leasing unless the Surface Management Agency determines, after consulting with the Council and the appropriate State Historic Preservation Officer, that the direct and indirect effects of mining would not result in significant adverse effects on such a property. At the land use planning stage, this consultation with the Council and the State Historic Preservation Officer shall consist of written notification of the area of potential Federal coal leasing and of the inventory results.

B. Activity Planning

1. At an appropriate time between tract delineation and completion of a regional coal leasing final environmental impact statement, the Bureau of Land Management will conduct, or have conducted, a special project Class II (project specific) inventory or Class III (hereinafter referred to as intensive field) inventory, as defined in procedures in BLM Manual Section 8111, as the Bureau of Land Management deems necessary on a case-by-case basis. The scope of the inventories conducted for activity planning will be determined through use

of completed land use planning Class II inventories and in consultation with the appropriate State Historic Preservation Officer. The Bureau of Land Management will evaluate, or have evaluated, the inventory results, in consultation with the appropriate State Historic Preservation Officer, to identify properties included in, or eligible for inclusion in, the National Register of Historic Places. The Bureau of Land Management will ensure that documentation for properties which appear to meet National Register criteria will be forwarded to the Keeper of the National Register with a request for a determination of eligibility pursuant to 36 CFR Part 63.

2. At an appropriate time between tract delineation and completion of a regional coal leasing final environmental impact statement, the Bureau of Land Management will apply coal leasing unsuitability criterion 7 (43 CFR 3461.1(g)) to additional properties which were identified during inventories conducted for activity planning as being included in, or eligible for inclusion in, the National Register of Historic Places. At the activity planning stage, consultation with the Council and the State Historic Preservation Officer under criterion 7 shall consist of written notification of the results of the inventories conducted for activity planning.

C. Lease Terms and Stipulations

Lease terms and special stipulations, at a minimum, will address the following concerns:

1. A lessee or designated representative will be required, as determined by the Bureau of Land Management with the concurrence of the appropriate State Historic Preservation Officer, to complete intensive field inventories of those portions of the lease tract, or portions of the mine plan area and adjacent areas, that may be affected by lease-related activities, and which were not previously inventoried at such a level of intensity. The inventory shall be conducted by a qualified cultural resource specialist approved by the Bureau of Land Management, in accordance with standards set forth in the appendix to this agreement. A report of the cultural resource inventory will be submitted to the Office of Surface Mining and the Bureau of Land Management.

2. A lessee or designated representative will be required to protect all properties included in, or eligible for inclusion in, the National Register of Historic Places from

lease-related activities until cultural resource mitigation measures (see 3 below) can be implemented as part of an approved plan for surface coal mining operations or exploration.

3. A lessee or designated representative will be required to develop cultural resource mitigation measures which will be included as part of a mine plan submittal. The mitigation measures will provide for appropriate levels of protection from adverse effects for specific properties. The mitigation measures will include, as appropriate, provisions for data recovery, curation, detailed recordation, stabilization, and relocation.

4. If any items or features of historic, cultural, or archeological value are discovered during surface coal mining and reclamation operations, the lessee or designated representative shall immediately notify the appropriate official, as set forth in the Cooperative Procedures between the Bureau of Land Management and the Office of Surface Mining (see paragraph IV.A.).

D. Program Start-Up Considerations

Because planning is currently under way for initial lease sales to be conducted in FY 1981 and FY 1982 and because inventories may be under way or already completed, the inventory requirement may be modified by the appropriate Bureau of Land Management State Director, in consultation with the Washington Office of the Bureau of Land Management, on a case-by-case (e.g., planning unit by planning unit or delineated tract by delineated tract) basis, substituting the best information obtainable within FY 1980 and FY 1981 budget constraints and within the time available before lease issuance.

II. Mine Plan Submission, Review, and Approval

A. The Office of Surface Mining will ensure that a lessee/permittee complies with all cultural resource protection lease terms, special stipulations, and conditions of plan approval for surface coal mining operations within those areas of the lease which are included in a mine plan and adjacent areas, should a mine plan be approved. In addition, for all leases issued or readjusted after the effective date of this agreement, the Office of Surface Mining, the Geological Survey, and the Bureau of Land Management, as appropriate, will ensure compliance with cultural resource related lease terms and stipulations. After review of the more specific and complete

findings submitted in a mine plan, the Office of Surface Mining may require more stringent protection and mitigation measures than required by 30 CFR, Chapter VII.

B. Prior to taking any Federal action on a mine plan, the Office of Surface Mining, in consultation with the Bureau of Land Management and the appropriate State Historic Preservation Officer, will identify areas within a proposed mine plan and adjacent areas which have a potential for receiving direct or indirect impacts on historic and cultural properties (determined pursuant to 36 CFR 800.3). The Office of Surface Mining, with concurrence of the appropriate State Historic Preservation Officer, will ensure that intensive field inventories have been, or will be, completed on the mine plan and adjacent areas before it recommends approval of a mine plan (see paragraph II.H.). A report of the cultural resource inventory will be submitted to the Bureau of Land Management and the Geological Survey. In the event of a failure to reach an agreement with the appropriate State Historic Preservation Officer regarding the appropriate inventory, the Office of Surface Mining will request Council review in accordance with 30 CFR 800.6.

C. If any historic or cultural properties are identified as a result of an inventory conducted pursuant to II.B., the Office of Surface Mining will consult with the Bureau of Land Management or the Surface Management Agency (if different), and then the appropriate State Historic Preservation Officer to determine if such properties are included in, or eligible for inclusion in, the National Register of Historic Places. If appropriate, documentation will be forwarded to the Keeper of the National Register with a request for a determination of eligibility in accordance with 36 CFR Part 63. Steps will be taken to preclude adverse effects on such properties until a determination of eligibility has been made. Copies of such determinations of eligibility will be submitted to the Geological Survey and the Bureau of Land Management or the Surface Management Agency (if different).

D. Before recommending approval of a mine plan, the Office of Surface Mining, in consultation with the Bureau of Land Management or the Surface Management Agency (if different), will review the applicant's proposed measures to minimize or prevent adverse effects (see 36 CFR 800.6 and 30 CFR 780.31) to historic and cultural properties and will ensure that:

1. Inventory results have been evaluated, in consultation with the appropriate State Historic Preservation Officer, to identify properties included in, or eligible for inclusion in, the National Register of Historic Places. Documentation for properties which appear to meet National Register criteria will be forwarded to the Keeper of the National Register with a request for determination of eligibility pursuant to 36 CFR Part 63.

2. The Criteria of Effect (36 CFR 800.3(a)) have been applied in consultation with the appropriate State Historic Preservation Officer.

3. The Criteria of Adverse Effect (36 CFR 800.3(b)) have been applied, as appropriate, in accordance with the requirements of 36 CFR 800.4(b) and in consultation with the appropriate State Historic Preservation Officer.

4. Alternatives to a proposed course of action that would avoid or mitigate any adverse effect on properties included in, or eligible for inclusion in, the National Register of Historic Places have been analyzed. Documentation, including, as appropriate, photographs, maps, drawings, and specifications, and other information sufficient to constitute a preliminary case report (36 CFR 800.13(b)) enabling the consultation process to begin, shall be submitted to the appropriate State Historic Preservation Officer for review and comment. The State Historic Preservation Officer shall have 15 calendar days after receipt of documentation to inform the Office of Surface Mining and the Bureau of Land Management or the Surface Management Agency (if different) if the information provided is inadequate.

E. Avoidance/mitigation requirements, including concurrence of the appropriate State Historic Preservation Officer, will be included as part of an approved mine plan. The Office of Surface Mining will notify the Council, in writing, of agreed upon avoidance/mitigation requirements. Information shall substantially conform to the requirements of 36 CFR 800.13(b)(4), (5), (6), and (11) relating to the content of preliminary case reports. Where agreement on avoidance/mitigation requirements cannot be reached between the State Historic Preservation Officer and the Office of Surface Mining, or where a National Historic Landmark, National Historic Park, National Historic Monument, or National Historic Site will be affected, the matter will be referred to the Council, requesting the Council's involvement pursuant to 36 CFR 800.6.

F. Mine plan approvals will contain a condition or requirement providing that, if any previously unidentified historic and cultural properties are discovered during surface coal mining operations, the operator will cease work in the immediate vicinity of the property and notify the Office of Surface Mining and shall not disturb such properties until the Office of Surface Mining issues instructions. Where there is a State/Federal cooperative agreement in effect, pursuant to section 523(c) of the Surface Mining Control and Reclamation Act of 1977, the contact point will be either the State Regulatory Authority or the Office of Surface Mining in accordance with the provisions of such a cooperative agreement.

G. Upon receiving a complete petition to designate an area as unsuitable for surface coal mining operations or to terminate a designation, the Office of Surface Mining will forward a copy of the petition for comment to the Bureau of Land Management or the Surface Management Agency (if different). The Office of Surface Mining will issue a decision on a petition pursuant to sections 522(c) and (d) of the Surface Mining Control and Reclamation Act of 1977 and 30 CFR Part 769. If the Office of Surface Mining determines that an area where a cultural resource is located should be designated as unsuitable for all or certain types of surface coal mining operations, appropriate protection measures will be developed. Decisions not to designate areas unsuitable or to terminate designations will not convey the right to conduct coal mining. Before surface coal mining operations can be conducted, a mine plan must be approved by the Secretary of the Interior, and a permit must be issued which includes compliance with 36 CFR Part 800, as outlined in this agreement.

H. During program start-up, not to exceed 6 months from the effective date of this agreement, the Office of Surface Mining will follow the procedures outlined in II.O. of this agreement, using the best information currently available, prior to recommending approval of a mine plan. The existence of resources that are of unusual significance (e.g., National Historic Landmark, National Natural Landmark) may affect recommendations for mine plan approval. Recommendations will contain the provision that surface disturbance may only occur in those portions of the area of operations which have been adequately inventoried (e.g., intensive field inventory) and any identified cultural and historic properties processed in accordance with the procedures of II.O. of this agreement. Surface disturbance in those portions of the area of operations which

have not been adequately inventoried will not be permitted until after any additional cultural and historic inventories, as determined by the Office of Surface Mining, in consultation with the appropriate State Historic Preservation Officer, have been completed and the Office of Surface Mining has complied with all the provisions of II.O. of this agreement.

III. Exploration

A. The Geological Survey or the Bureau of Land Management, as appropriate, will require that, prior to approval of coal exploration, lessees, permittees, and licensees shall conduct, ur have conducted, intensive field inventories in areas of potential environmental impact (e.g., drill holes, access routes, other surface disturbances) in a proposed exploration area, unless the area has been previously inventoried at that level of intensity. Inventory results will be evaluated, in consultation with the appropriate State Historic Preservation Officer, to identify properties included in, or eligible for inclusion in, the National Register of Historic Places. Documentation for properties which appear to meet the National Register criteria will be forwarded through the appropriate Agency to the Keeper of the National Register with a request for determination of eligibility pursuant to 36 CFR Part 63. The responsible Agency will take steps to preclude adverse effects until such a determination has been made.

B. Where there would be an adverse effect (determined pursuant to 36 CFR 800.4) on a property included in, or eligible for inclusion in, the National Register of Historic Places, the Geological Survey will consult with the Bureau of Land Management or the Surface Management Agency (if different), and the appropriate State Historic Preservation Officer and will:

1. Ensure that mutually acceptable measures to avoid or mitigate the impacts of coal exploration are developed; and

2. Notify the Council, in writing, of agreements reached under the provisions of 1 above and provide the Council with a copy of such agreements. The Council need not be afforded further opportunity for review and comment.

C. When it is determined during B above that an affected property is a National Historic Landmark, National Historic Park, National Historic Monument, or National Historic Site, or when agreement cannot be reached between the Geological Survey or the Bureau of Land Management and the appropriate State Historic Preservation Officer on satisfactory mitigation measures, the comments of the Council will be requested in accordance with 36 CFR 800.6.

D. When approving exploration plans, licenses or permits, the Geological Survey or the Bureau of Land Management, as appropriate, will stipulate that, if any previously unidentified historic or cultural properties are discovered during exploration operations, the lessee, permittee, licensee, or operator will cease work in the immediate vicinity of the property, notify the appropriate Agency, and shall not disturb such properties until so authorized by that Agency.

E. For coal program exploration activities initiated by the Department of the Interior, with the exception of the leasing and development of lands or coal deposits held in trust for Indians by the United States, the same standards for compliance as presented in A through D above will be adhered to.

IV. Administration

A. The Bureau of Land Management will develop separate cooperative procedures with the Geological Survey and the Office of Surface Mining. These procedures, which will integrate cultural resource protection into the Federal coal management program of the Department of the Interior, will be completed no later than October 1, 1980. The Council will be requested to review these procedures to insure continuity and consistency with this Programmatic Memorandum of Agreement.

B. This Programmatic Memorandum of Agreement and the appropriate inventory reports identifying properties included in, or eligible for inclusion in, the National Register of Historic Places will be referenced in each environmental impact statement and environmental assessment involving a Federal coal action covered by this agreement.

C. The Bureau of Land Management, Office of Surface Mining, and/or Geological Survey will provide the appropriate

State Historic Preservation Officer with copies of the reports of Class I, II, and III inventories for use in the comprehensive Statewide historic preservation inventory conducted pursuant to 36 CFR Part 61.

D. At the request of the President or a Member of Congress, the Council may advise the Bureau of Land Management, Office of Surface Mining, and/or Geological Survey that a particular action, authorized by a mining or exploration permit or lease, will require individual review and comment pursuant to 36 CFR 800.6. In that event, the above Agencies will comply with the provisions of the Council's regulations.

E. This agreement is not binding on any Federal Agency which is not party to this agreement. In cases where the surface is managed by other Federal Agencies or by a private surface owner not party to this agreement, all Bureau of Land Management, Office of Surface Mining, and Geological Survey actions related to the Federal coal management program of the Department of the Interior will be conducted in accordance with 43 CFR 3400.3-1, 3400.3-3, 3461.1 criterion 1, and Subpart 3427, and with any subsequent agreements between an Agency or private surface owner and the Department of the Interior.

F. The cultural resource inventory provisions in sections I.A. and I.B. of this agreement do not apply to areas for which the Bureau of Land Management receives an application to lease coal in accordance with 43 CFR Subpart 3425 (Leasing on Application) or in accordance with 43 CFR Subpart 3430 (Preference Right Lease). For such cases, the Bureau of Land Management, in consultation with the appropriate State Historic Preservation Officer, will determine the level of cultural resource inventory to be conducted. The cultural resource inventory and mitigation requirements related to surface coal mine operation or exploration plans submitted pursuant to 43 CFR Subpart 3425 will be the same as those specified in sections I.C., I.D., II, and III of this agreement.

G. The Bureau of Land Management, Office of Surface Mining, and Geological Survey will notify the Council regarding any changes to their regulations, guidelines, or directives relative to the administration of this agreement or which may affect their authority to implement this agreement.

H. In addition to the consideration of National Register of Historic Places and Register-eligible properties covered by this agreement and 36 CFR Part 800, the Bureau of Land Management, Office of Surface Mining, and Geological Survey

will continue to consider the full range of cultural resources as provided for in other authorities.

I. This agreement does not apply to the leasing and development of lands or coal deposits held in trust for Indians by the United States.

J. The Advisory Council on Historic Preservation, Bureau of Land Management, Office of Surface Mining, and Geological Survey will review the provisions of this agreement in 1982 and on a biennial basis thereafter to determine whether modification or termination is appropriate. Should the Federal coal management program of the Department of the Interior be revised or superseded or the regulations of the Council revised, the ratifying parties will mutually determine whether the provisions of the agreement will continue to apply.

K. This agreement is effective on the date of the last signature. The agreement may be revised or amended by mutual agreement of the signers. This agreement may be terminated by any of the undersigned parties, provided that the party initiating such termination provides a 90-day notice and reasons therefore to the other parties.

Executive Director, Advisory Council on Historic Preservation — (Date) Feb. 6, 1980

Director, Geological Survey — (Date) 27 March 80

Director, Bureau of Land Management — (Date) 3/27/80

Chairman, Advisory Council on Historic Preservation — (Date) 5/20/80

Director, Office of Surface Mining Reclamation and Enforcement — (Date) 5/1/80

Concurrence:

President, National Conference of State Historic Preservation Officers — (Date) 5/1/80

APPENDIX
PROFESSIONAL QUALIFICATIONS

A variety of specialists may be appropriate for work in particular kinds of cultural resource studies. Geologists, geographers, ethnographers, ethnohistorians, and folklorists are among the specialists occasionally employed in such studies. In general, however, the core disciplines represented are archeology, history, or architecture. The following recommended minimum professional qualifications apply to the professionals with supervisory or direct responsibility for specific studies related to a cultural resource program. The recommended professional qualifications do not apply to the various cultural resource technicians working under the supervision of qualified professionals who have the responsibility for the quality of the work performed.

1. Archeology

The recommended minimum professional qualifications in archeology are a graduate degree in archeology, anthropology, or a closely related field, from an accredited college or university, plus:

a. At least 1 year of full-time professional experience or equivalent specialized training in archeological research, administration, or management;

b. At least 4 months of supervised field and analytic experience in general North American archeology; and

c. Demonstrated ability to carry research to completion.

In addition to these recommended minimum qualifications, a professional in prehistoric archeology shall have at least 1 year of full-time professional experience at a supervisory level in the study of archeological resources of the prehistoric period. A professional in historic archeology shall have at least 1 year of full-time professional experience at a supervisory level in the study of archeological resources of the historic period.

2. History

The recommended minimum professional qualifications in history are a graduate degree in American history, or a closely

related field, from an accredited college or university, or a bachelor's degree, or its equivalent, in history, or a closely related field, from an accredited college or university, plus one of the following:

a. At least 2 years of full-time experience in research, writing, teaching interpretation, or other demonstrable professional activity with an academic institution, historical organization or agency, museum, or other professional institution; or

b. Substantial contribution to the body of scholarly knowledge through research and publication in the field of history.

3. Historical Architecture

The recommended minimum professional qualifications for individuals practicing historical architecture are a professional degree in architecture from an accredited college or university or a State license to practice architecture, plus one of the following:

a. At least 1 year of graduate study in architectural preservation, American architectural history, preservation planning, or closely related field, and at least 1 year of full-time professional experience on preservation and restoration projects; or

b. At least 2 years of full-time professional experience on preservation and restoration projects. Experience on preservation and restoration projects shall include detailed investigations of historic structures, preparation of historic structures research reports, and preparation of plans and specifications for preservation projects.

COLORADO HISTORICAL SOCIETY

The Colorado Heritage Center 1300 Broadway Denver, Colorado 80203

18 April 1980

Charles W. Luscher
Acting State Director
Bureau of Land Management
1600 Broadway
Denver, CO 80202

RE: Green River/Hams Fork Coal Lease Region

Dear Mr. Andrus:

Thank you for your correspondence dated March 14, 1980, concerning this proposed project.

It is our understanding that the proposed coal lease areas within the Green River/Hams Fork region have not been completely surveyed. As a result, the potential exists for as yet unidentified significant resources to be located in the impact areas of the proposed coal leases. Therefore, this office recommends that the delineated coal lease tracts be surveyed prior to awarding the leases.

Furthermore, we do not concur with your determination that the issuance of coal leases does not constitute an effect on cultural resources. While the issuance of coal leases in and of itself will not have a direct effect on cultural properties which may be eligible, it is the opinion of this office that such issuance does constitute an effect in that the ultimate result, coal mining operations, while later in time, are still reasonably foreseeable and certainly have the potential to adversely affect cultural resources.

Sincerely,

Arthur C. Townsend
State Historic Preservation Officer

ACT(KKP):ng
cc: Jane Kardokus, Colorado Attorney General's Office

Advisory Council On Historic Preservation

1522 K Street, NW
Washington, DC 20005

Reply to:

Lake Plaza South, Suite 616
44 Union Boulevard
Lakewood, CO 80228

August 8, 1980

Mr. Charles W. Luscher
Acting State Director
Colorado State Office
Bureau of Land Management
Colorado State Bank Bldg., Room 700
1600 Broadway
Denver, Colorado 80202

Dear Mr. Luscher:

On July 28, 1980, Roberto Costales of your staff provided the Council with a copy of your letter of June 25, 1980. We have no record of receiving that letter which stated that "Pursuant to 36 CFR 800.9, the Bureau of Land Management (BLM) is requesting the comments of your office on the draft EIS (for the Green River-Hams Fork)." We understand from Mr. Costales that the BLM's intent is to request Council comment under Section 106 of the National Historic Preservation Act of 1966 (16 U.S.C. Sec. 470f, as amended, 90 Stat. 1320) for the coal leasing program in the Green River-Hams Fork area.

By letter of May 15, 1980, the Council informed you that the DES for the Green River-Hams Fork Regional Coal leasing program appeared to be incomplete in its treatment of cultural properties. We recommended that the BLM obtain the substantive comments of the Council through the process outlined in 36 CFR Part 800.9 of the Council's regulations, "Protection of Historic and Cultural Properties" (36 CFR Part 800). Five days later, on May 20, 1980, the Chairman of the Council ratified a programmatic Memorandum of Agreement (PMOA) with the BLM, Office of Surface Mining, and the Geological Survey "Regarding the Federal Coal Management Program." That PMOA constitutes the comments of the Council regarding BLM's responsibilities for cultural resource management for Federal coal leasing programs, including the Green River-Hams Fork coal leasing program. A copy of that PMOA is enclosed for your information and it, and supporting documentation, should be included in the final environmental statement for this undertaking in order to demonstrate the BLM's compliance with Section 106.

We regret that we were not aware of the imminent ratification of this PMOA at the time that we responded to your request for comments under the National Environmental Policy Act of 1969. We look forward to working with the BLM as appropriate in the future.

Sincerely,

Louis S. Wall
Chief, Western Division
of Project Review

Enclosure

BLM Library
Denver Federal Center
Bldg. 50, OC-521
P.O. Box 25047
Denver, CO 80225

